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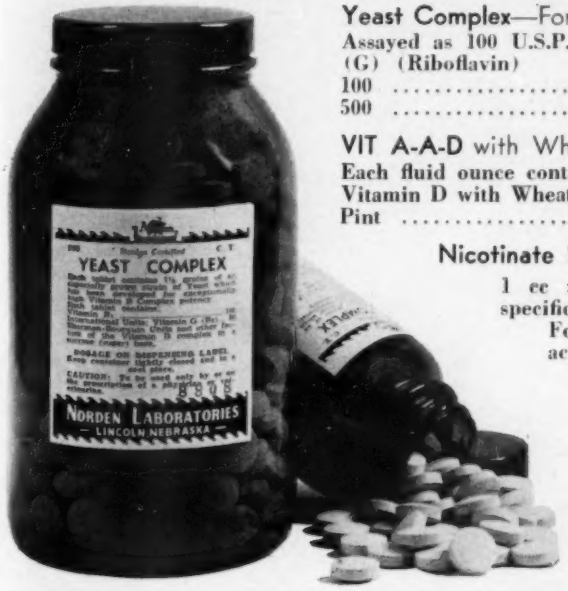

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Journal of the American Veterinary Medical Association

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Presidential Address

H. W. JAKEMAN, V.M.D.
Boston, Mass.

ANNUAL CONVENTIONS of the American Veterinary Medical Association have increased in significance with each passing year. In peace times they have brought together, in ever increasing numbers, leaders in all branches of the profession to discuss progress, plans for advancement and policies to be adopted. They have given to those in attendance information regarding professional developments, demonstrations of improved techniques, and an opportunity to consult with colleagues concerning problems pertinent to the many fields of veterinary endeavor. They have renewed cherished friendships and established others of priceless value. Above all, they have been the inspiration for the great advancement which has taken place in veterinary science. Correlatively, AVMA conventions have given to each and everyone a greatly increased feeling of pride in being part of a profession made up of men and women such as we see here today, and pride in a profession upon which rests heavy responsibility in the social and economic structure upon which human welfare depends. It is significant that holding this convention was made possible under conditions brought about by our being engaged in war. That it was, should prove inspiring to all of us and it should further emphasize the importance of the veterinary profession in the war effort. The program and deliberations will be directly and indirectly connected with increasing our efficiency to meet the responsibility which is ours.

The assurance of a sufficient and safe food supply for soldier and civilian is dependent, to a considerable extent, upon a competent and numerically adequate veterinary service. History reveals the futility of efforts to accelerate the production of gregarious animals without a comparable increase in disease supervision. War disturbs the personnel associated with animal production and it is also conducive to laxity in the prevention of insidious diseases which can result in a serious food shortage. The United States and Canada are recognized throughout the world as the safest places in which to raise livestock. The successful eradication of many destructive diseases of animals and the vigilance exercised in keeping out exotic animal plagues have made possible the development of an animal industry of unparalleled magnitude. In these days of increased hazards, the profession must prove equal to its intensified responsibility.

The American Veterinary Medical Association was a child of war—the War Between the States. The depletion of farm animals by disease and the shortage of food and clothing for the armed forces was the inspiration which brought about the founding of this Association on June 16, 1863. This was the foundation upon which the veterinary service of the nation has been built.

While the history of our Association records its struggle for advancement, its accomplishments, its ideals and ever increasing importance, a brief review of our development seems fitting and timely. For brevity the milestones are listed by decades.

The period of the 1860's is noted for the birth of organized veterinary medicine.

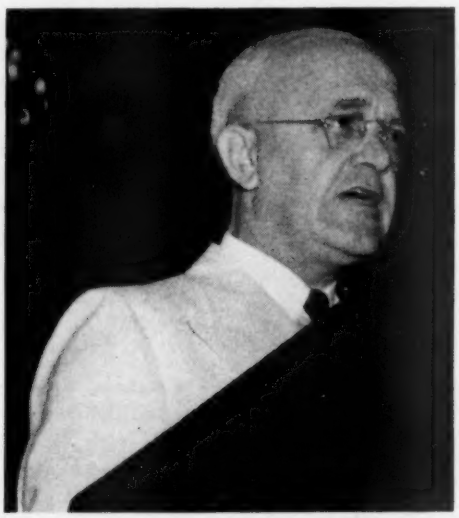
The 1870's are renowned for the birth of American veterinary literature. The American Veterinary Review was started in 1877. It was published by the Association until 1882 and again from 1915 to the present time under the name of the *Journal of the American Veterinary Medical Association.* This decade was also noted for important progress in veterinary military service (1879); it records serious outbreaks of contagious bovine pleuropneu-

Delivered at the opening session of the seventy-ninth annual meeting, Chicago, Aug. 24-27, 1942.

monia, tremendous losses from hog cholera, Texas fever, glanders, and other diseases.

The 1880's mark the beginning of state associations—the start of state veterinary education (Iowa 1879); the enactment of the first practice acts; the founding of the U. S. Bureau of Animal Industry as a result of public demand for government assistance to correct a situation seriously threatening the livestock industry and endangering public health. This decade is noteworthy for the successful campaign against contagious bovine pleuropneumonia and the beginning of organized efforts by American veterinarians to control disease.

The 1890's are outstanding as the period when a cattle tick was found to be the vector of a protozoan disease (Texas fever); for important investigations which led to the discovery of the cause of hog cholera and of a method of immunization; for the enactment of practice acts in the principal states; the lengthening of the veterinary course to three years and increasing entrance requirements. This decade marks the start of veterinary research, the beginning of biological therapy, local anesthesia and federal meat inspection.



H. W. Jakeman, delivering his presidential address.

The 1900's cover the era of mushroom colleges which gave the AVMA a great deal of trouble in its effort to keep veterinary education advancing; hog-cholera immunization was perfected by Dorset, Niles and McBryde; federal meat inspection was reorganized and augmented; college attendance increased and state associations developed larger memberships as the graduates were more widely distributed through the rural districts; livestock sanitary work took form through federal-state coöperation; tick eradication was begun; the relation of bovine and human tuberculosis was suggested as a result of the typing of Koch's bacillus by Theobald Smith, although this remained a controversial subject for a few years.

The 1910's—the World War I decade—are marked for the granting of commissions from second lieutenant to major to army veterinarians and the forming of a Veterinary Corps under the Medical Department; the commissioning of more than 2,000 veterinarians; the organizing of the first American veterinary corps to operate against enemy resistance (France 1918); the increase of the veterinary college course to four years and the entrance requirement to a high school education; also the closing of the principal private schools; increase of the AVMA membership to 2,500; the purchase of the American Veterinary Review (1915) to become the present Journal of the AVMA; the practical eradication of cattle and sheep scabies; extension of federal-state livestock sanitary work, particularly tick eradication.

The 1920's mark the closing of the last remaining private veterinary school and the birth of the present era of veterinary education; the growth of specialized veterinary education; the growth of specialized veterinary supply laboratories; the development of swine and cattle practice as motor power replaced the horse; the beginning of general interest in parasitology; the starting of small animal practice and hospitalization on a large scale with the erection of many pet animal hospitals in keeping with professional developments.

The 1930's denote the period wherein

there was great increase in veterinary curriculums, entrance requirements, teaching staffs, buildings and modern laboratory equipment. It records nation-wide extension of bovine tuberculosis eradication measures and practical completion of tick eradication; the expansion of meat inspection; the systematic control of brucellosis and the development of calfhood vaccination as a preventive measure; the improvement of biological products, including canine distemper and encephalomyelitis vaccines and serums. This decade records an AVMA reorganizing and revitalizing program resulting in a growing understanding by the public of the rôle played by the veterinary profession. It also resulted in improvement of the Association's literature and in the practical doubling of membership and general interest in its work.

The 1940's have already marked a new era. The Association was designated by the government as representing the veterinary profession in planning the national medical defense efforts in coöperation with physicians and dentists, thus giving the veterinary profession well-merited recognition in its relation to health and welfare. It is gratifying to know that veterinarians of the United States have gone over the top in their return of completed questionnaires to the National Roster of Scientific and Specialized Personnel of the National Resources Planning Board. The latest figures show that a total of 12,400 completed questionnaires have been received. This is slightly over 95 per cent of the number sent out and it is safe to predict that before the books are closed the veterinary profession will have responded almost to a man.

The 1940's have established two record years in association membership. The increase in membership in 1940 was the greatest in the history of the Association and the past year has been second. There were a total of 850 applications this year, of which 470 were from recent veterinary graduates. As will be shown by the Treasurer's report the association has also had a good year financially.

The New President

W. W. Dimock

This decade denotes the expansion of coöperative relations with allied national associations. Many of the problems confronting the medical and agricultural sciences can be solved through coöperative effort only. Fostering a relationship of understanding and helpfulness with other scientific groups will result in mutual benefit and in the advancement of science. The past year has seen the foundation laid for an inter-association program which should continue for all time and which will result in a broader concept of veterinary science.

The present decade marks the setting up of a research program by the Association with definite aims directed toward the intensification and expansion of veterinary research. It also marks many advances in scientific knowledge. Developments have been noteworthy in chemotherapy, in vitamin studies, in the development of biological products of merit; in diagnostic procedures and in the field of surgery. It is safe to predict that this decade will surpass

all others in advncement of the profession and in the growth of the American Veterinary Medical Association.

OUR VETERINARY SERVICE

In reviewing the significant developments which have led to our present veterinary service, it would be remiss not to give credit to the Bureau of Animal Industry, United States Department of Agriculture, for the splendid service it has rendered and is continuing to render. Many of the accomplishments of the veterinary profession to which we point with pride and which have brought great credit to veterinary science have been carried out by veterinarians in the employ of the Bureau of Animal Industry. The eradication of highly destructive diseases of animals, the constant vigilance against their reentrance, the development of scientific procedures and the furtherance of knowledge through research are contributions of federal veterinarians of inestimable value to the livestock industry. It is regrettable that this great federal veterinary service has not been known through the years by some name incorporating the word "veterinary" or "veterinarian."

The President-Elect

Charles W. Bower

Many veterinary services rendered the public are not credited to the profession but to bureaus of animal industry, to departments of livestock disease control, to animal hygienists, sanitarians, meat or milk inspectors, pathologists and so forth. Had the adjective "veterinary" or the noun "veterinarian" been used more constantly and persistently through the years the achievements of the profession would be much more widely and favorably known.

The Bureau of Animal Industry, U. S. Department of Agriculture was established May 29, 1884. It came into existence as the result of public demand for government assistance to correct a situation seriously threatening the livestock industry and endangering public health. The export of our cattle and sheep to foreign countries was prohibited, our pork products were not permitted to enter any country of Continental Europe and the nation was losing from 25 to 30 million dollars worth of hogs annually from contagious diseases. Cattle raisers were in a state of near panic from losses due to Texas fever and contagious pleuropneumonia. Likewise, sheep raisers were confronted with enormous losses. If, at *this* time of national crisis such a situation existed it would constitute a calamity which would spell defeat for the Allies. That it does not exist is due to the achievements of the veterinary profession under the guidance of our Bureau of Animal Industry. Such a service is too enormous for monetary evaluation. The present satisfactory condition of American live stock and veterinary service, are concomitant. Starting with a chief, the immortal Dr. Daniel E. Salmon, a clerk and a force not to exceed 20 at any one time, the Bureau has grown to a force well over 4,500 and now under the world-renowned chief, Dr. John R. Mohler, its activities are diversified and of incomputable value to the

livestock industry. Charged by Act of Congress with the building up and protecting of the livestock industry, its duties embrace control and eradication of animal diseases, experiementation and research, inspection of import and export animals, inspection at all large slaughtering establishments, supervision of the preparation of biological products for veterinary use, carrying out eradication and control programs in coöperation with the various states and in general operating as an American veterinary control service of which we are proud and of animals. We have had no dourine for 21 years, no sheep scab for 14 years, and this last year no anthrax, glanders, rabies or horse mange have been reported. There were two small outbreaks of cattle mange. An outbreak of hog cholera has been controlled and cleared up. There have been periods as long as two years without a case of hog cholera in Canada. Half the cattle in Canada are under supervision and have been tested for tuberculosis. There are 2,534 herds under supervision for bovine brucellosis and 1,492 herds are listed as free

W. C. Glenney (left), Elgin, Ill., delivering the address of welcome at the seventy-ninth annual meeting, and The Hon. Geo. W. Gillie responding.

which the rest of the world envies. May there never come a time when any political, or other factor, will interfere with or disrupt the all-important veterinary service rendered through, and by, the Bureau of Animal Industry, U. S. Department of Agriculture.

The Health of Animals Division, Department of Agriculture of Canada, also has a splendid record of veterinary achievement and service. A recent communication from the veterinary director general gives the following interesting summary: "Canada is remarkably free from serious diseases from the disease. Calfhood vaccination is now available through veterinary practitioners and permits to purchase the vaccine are issued to veterinarians only. The veterinary meat inspection service has been increased to meet the war needs of Great Britain".

The vital rôle of these two national agencies in the veterinary service of the United States and Canada cannot be looked upon by the American Veterinary Medical Association as a fixture beyond the possibility of attack by forces with ulterior motives, or with disregard for the venterinary

achievements and objectives of this public service. It is recommended, therefore, that the AVMA appoint a standing committee on the Federal Bureau of Animal Industry and Dominion Health of Animals Division in order to give support of the profession to matters of mutual concern and interest and to maintain at all times the closest coöperative effort in the interests of efficient veterinary service.

CURRENT PROBLEMS

In addition to the paramount duty of providing trained personnel for the armed

O. V. Brumley (left), chairman of the Executive Board, awarding service scroll to H. W. Jakeman.

forces and for civilian needs, some of the major problems confronting the profession are—

a) The maintenance of continuous eradication measures against bovine tuberculosis and the elimination of poultry tuberculosis.

b) The curtailment of bovine brucellosis with a view to its eventual eradication.

c) The control of bovine mastitis through the improvement and application of diagnostic, sanitary and therapeutic measures.

d) The elimination of ecto- and endoparasites through scientific methods of prevention, diagnosis and anthelmintic treatment.

e) More intensive study of animal nutrition and application of existing knowledge of nutritional requirements in order to decrease animal diseases and increase animal productivity.

f) Greater reduction of morbidity and mortality in newborn animals and young stock, and salvaging sick and injured mature animals by having a well-informed, private, veterinary service available for every farm.

g) Further participation in the Poultry Improvement Project of the organized poultry industry and more widespread interest by practitioners in controlling poultry diseases. Adequate courses in our veterinary colleges are needed to train students in poultry management, breeding and feeding. Greater curricular emphasis on poultry diseases would result in practitioners meeting the need for professional service in this important field.

h) The provisions of sufficient, specially trained veterinarians to meet present needs and opportunities for veterinary service in such fields as local, state and federal public health work, food inspection and sanitation; also the exercise of initiative and leadership in the control of rabies and other animal diseases of particular importance to public health. These are fields of public service which sorely need the best efforts of the veterinary profession, but the opportunities will be lost to us if more interest is not shown by the profession and if specially trained veterinarians are not available to do the work. In view of the vast social and economic changes which this world war makes inevitable, the veterinary profession must be prepared for participation in the post-war program with well-thought-out recommendations which will be a real contribution to rehabilitation measures.

i) The need of civil service status for veterinarians engaged in livestock disease-control work under the direction and supervision of officials who are veterinarians, qualified and selected for their responsible positions on the basis of special training, rather than political preferment.

j) A more adequate distribution of veterinary services with means for providing

such services in those areas where little or none now exists.

While these do not constitute all of the problems confronting us, they are of greatest importance in maintaining an adequate veterinary service to the nation. Solution of them will not be simple nor immediate but in general will depend upon the organized and well-planned effort of the entire profession. It must be kept in mind that social, economic and political forces beyond the control of organized veterinary medicine are constantly influencing the possibilities of service and development. At times, these forces fail to see eye to eye with the profession in its ideals. They even tend to nullify intelligent and competent control of animal diseases, especially those of an infectious nature involving live stock and pet animals. Those factors beyond the control of veterinarians can be influenced by increasing public recognition of veterinary medicine as a learned profession made up of men possessing cultural and ethical attributes which qualify them to serve the public intelligently and broadmindedly as guardians of animal health. The factors and trends which the profession *can* control constitute the most important problems currently facing organized veterinary medicine. Many of these problems are not new but all have gained in significance. Greatly increased educational standards in the colleges, young men of advanced education entering the colleges and increased numbers of veterinarians being graduated make it imperative that careful guidance be exercised so that the profession will not suffer in its possibilities of service, nor in its status as a learned profession essential to national welfare. Perhaps too many trends have been and continue to be ignored or they are discussed but with no resultant action. To combat any trend, leadership and organized effort are essential. In addition, individual effort is important. As most trends have their origin in a state or group of states, constituent associations of the AVMA should be alert to combat deleterious and unfair influences. History records many instances where objectionable trends have been allowed to develop until it has been too late to correct them. Building up the national, state and local associations numerically and financially is of fundamental importance. This requires the active interest of a greater number of veterinarians possessing the attributes of leadership and professional ideology coupled with a willingness to contribute, in time and work, to organized efforts for advancement. It requires broader vision with

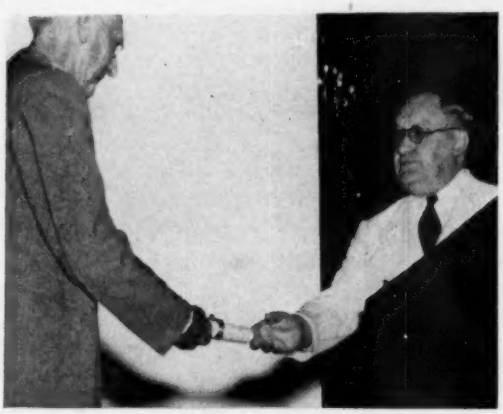
Presentation of Twelfth International Veterinary Congress prize to Brigadier General R. A. Kelser, by Chairman Brumley.

recognition by many of our comparatively small number that advancement of the profession must come first and that of the individual second. That there will be a far-reaching adjustment of world economics following the war is apparent. The veterinary profession will continue to be indispensable to national welfare and it is conceivable that its services will be recognized as of greater economic significance than at present. To meet changed conditions and to assure the justified status of the profession and each individual member, organized guidance is of greater importance than ever. If each member would discuss with a nonmember the necessity of presenting a united front to the fullest extent of the numerical prospects, the effort would provide the strength needed to perform the task confronting us.

VETERINARY EDUCATION

The increased standard of our veterinary educational system has done much to ele-

vate the profession to the level of other learned professions. Any let down in educational standards would be disastrous. Through the years, the American Veterinary Medical Association has molded the destiny of the profession by constantly striving to advance veterinary education and research. Great progress has been made but the veterinary, educational situation presents many problems which call for careful study and handling. Some of these are transitory and due to conditions created by the war, such as the necessity of instituting an accelerated curricular program. Other problems include many which have long existed. Among these are—(a) adequate financial support for both teaching and research; (b) the adoption of uniform educational methods based on carefully worked out standards; (c) a modification



W. W. Dimock (left), receiving the president's key and scroll from Chairman Brumley.

of the curriculum to meet existing and probable needs in veterinary service; (d) a survey of the United States to determine the distribution of veterinary service and thus approach more intelligently the need for additional colleges; (e) a method of influencing distribution of graduates to different fields of veterinary endeavor. The addition to the curriculum of a course of study in veterinary economics based on reliable vital statistics would do much to give the student a picture of the economic significance of the profession he is about to enter. Our advancement is dependent to a great extent on the type of service we render to agriculture and to medical science. It is also dependent on our supply of personnel for those fields in need of adequate veterinary service. Overcrowding of one branch, with numerical sparcity in others, will prove detrimental to the fulfilment of the broad assignment which has been opened up to veterinary science. Our concept of the profession should not be limited to problems connected with the prevention and treatment of animal diseases. No other branch of science offers greater opportunities in diversified fields than does the veterinary profession. Our educational system and guidance of the undergraduate will do much to influence development of highly trained men who will be fitted to seize these opportunities.

A difference of opinion exists as to preveterinary requirements and the ideal veterinary curriculum. Some advocate a seven year course, leading to a baccalaureate degree and a doctorate degree in veterinary medicine. Another plan has been receiving considerable attention and is deserving of careful study. One of the largest eastern universities is now offering a course in the fundamental branches of medical science extending over a four year period. Two additional years are required for specialization in either medicine or dentistry. It is proposed to include veterinary medicine. Thus, graduates in human medicine, dentistry or veterinary medicine would have the same basic training in the science of medicine. Whether or not this constitutes the ideal standard of veterinary education is a problem which requires study. It would seem that the expanse of veterinary science has reached a point where the colleges can not expect to graduate men who are equipped with training and practical experience in all of the many fields which will be open to them. A solid foundation in the science of medicine with greater emphasis on such basic subjects as physiology, pathology, genetics, nutrition, physiochemistry, sanitary science and others will enable the graduate to become proficient, with additional concentrated effort, in any specialized field he or she might select.

The educational problems of the veterinary profession are of tremendous importance to its advancement and expansion. They, therefore, constitute matters which require a joint study by the American Veterinary Medical Association and the college faculties. The Committee on Education is to be highly commended for the splendid work it has done and is doing. Its responsibility to the profession and the importance of its duties are not abating but are becoming more intensified.

VETERINARY RESEARCH

As a report will be submitted by the Research Council some time during this convention no reference will be made to the progress of the research program.

The stimulation of veterinary research, through the development of more well-qualified research workers, the correlation of veterinary research, and the implementation of our profession with the personnel and financial support necessary for needed research are objectives of this program which should be of primary importance to the administrations of the future. The advancement of veterinary science is largely dependent upon its ability to solve some of the present and future problems for which it is and will be held responsible. Veterinary research has a splendid record. It has contributed immeasurably to the protection of both animals and man. It is well recognized that our scientific knowledge concerning certain, complex factors responsible for livestock losses is very meagre. It is inevitable that new disease problems affecting animals will arise from conditions brought about by the war. We must be prepared to meet them. The success of the research program will depend largely upon obtaining adequate financial support. A systematic campaign to obtain funds will result in a great many contributions, now going to other branches of science, being placed at the disposal of the Association. The program has so much merit and appeal from a number of standpoints that its success seems assured. It is recommended that the Executive Board appoint a committee of five to obtain additional funds for carrying out the fellowship project. This is not a function of the Council.

THE VETERINARY CORPS OF THE U. S. ARMY

During the year a distinct honor has been conferred upon the veterinary profession through the nomination by President Roosevelt of Colonel Kelser, Director of the Veterinary Corps, for the rank of brigadier general and the confirmation of the nomination by the United States Senate. The AVMA is gratified at this recognition of merit and efficiency in one of its outstanding members, a man of scientific attainment, of exceptional administrative ability and a man beloved by all veterinarians for his integrity, force, affability and devotion to the veterinary profession. The promotion is a tribute to, and a recognition of, the importance to the nation of veterinary service. We are proud of the Veterinary Corps. The excellent work it is doing is too little appreciated by too large a number of civilians. Many veterinarians are in the service at great personal sacrifice. We respect them and admire their attitude of whole-hearted willingness to contribute their services to the cause of freedom. Our hearts and well wishes are with all men in the service and our prayer is that they will live long to enjoy the satisfaction of their contribution to the maintenance of democracy and the elimination of world despotism.

WOMEN'S AUXILIARY

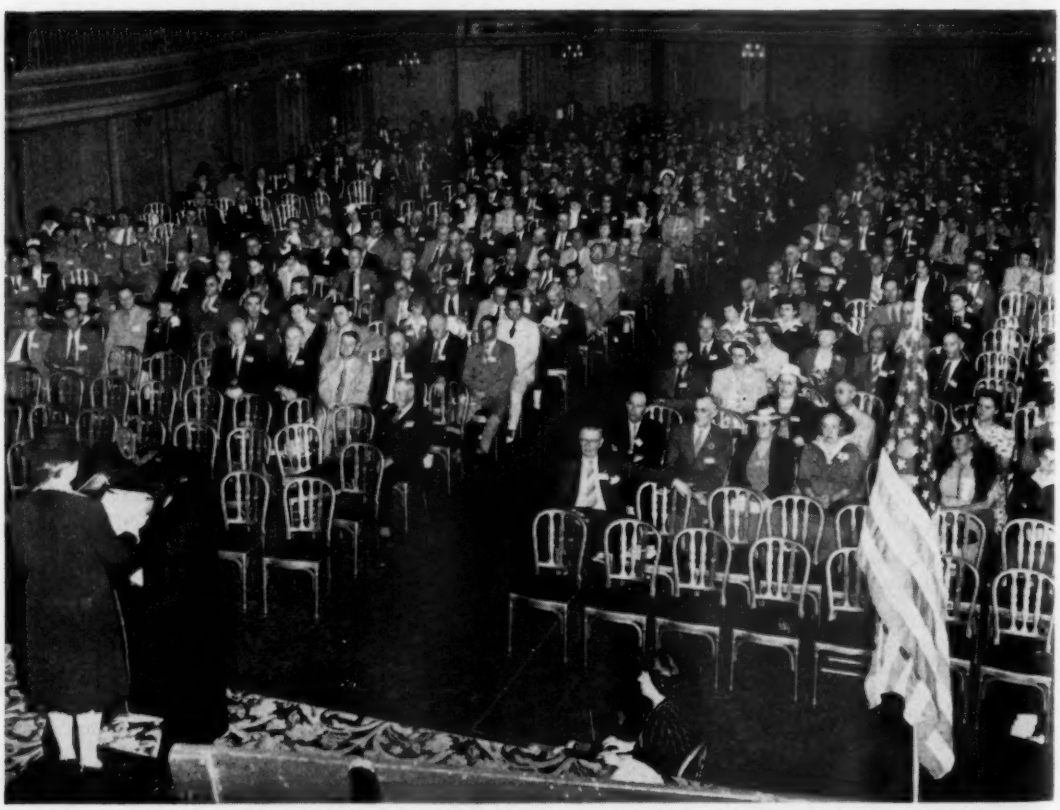
For many years the Women's Auxiliary has been doing praiseworthy work. The administration of a revolving fund from which loans are made to senior students in accredited veterinary colleges has been an important contribution to the veterinary profession. Many veterinarians were enabled to complete their education through this fund. There are many other ways in which the Women's Auxiliary gives loyal and very important support to the profession. It would be impossible to discuss them at this time. With the growth of the AVMA to approximately 7,300 it is hoped

that the Auxiliary will grow proportionately. Its support and aid will be more significant than ever in the days ahead. That it will be well organized and ready is assured. The masculine members of the Association wish to express their thanks and appreciation.

Before closing I wish to pay tribute to the good work of the committee on local arrangements under the leadership of Dr. H. Preston Hoskins. The uncertainties which have existed resulted in a more difficult job than usual, but the men and women of the various committees have spared neither time nor effort to make this convention a memorable one and I am certain that it will be. A plan for budgeting expected income and expenditures has been worked out and it should prove a valuable pattern for future meetings. We owe a vote of thanks to the members of the committees who have done so much to make possible the benefits and pleasures of this convention.

I wish to thank the entire organization for the accomplishments of the Association year. It is regrettable that each and every veterinarian of the United States and Canada can not know of the many, many things which those charged with responsibility throughout the year, do for them. I cannot praise too highly the efficient services of our Executive Secretary, Dr. John G. Hardenbergh and our Editor of Publications, Dr. L. A. Merillat.

In conclusion, I wish to express my sincere appreciation of the great honor conferred in my selection to serve as your president. It is an honor which I shall always cherish. I have given my best to uphold the dignity of the office and to meet its responsibilities. If I have succeeded in meriting the confidence placed in me I am deeply grateful.



Mrs. Wm. Moore, president of the Women's Auxiliary, addressing the opening session of the seventy-ninth annual meeting in Chicago, Aug. 24-27, 1942.

The Art of Veterinary-Medical Writing

L. A. MERILLAT
Chicago

PRIMARILY, the purpose of this paper is to codify typographical rules for the official publications of the Association. Pointing out the errors committeed in the use of the general language is secondary. Improving the appearance of the journals is also an objective. Uniform, conventional composition and "topographic" elegance collectively, is the literary front we are attempting to present as one of the means of accomplishing the ends of veterinary medicine in this country. Let it be known, forthwith, that the task essayed is known to be delicate and difficult and that there is no assumption of literary expertness implied by the writing of this paper. Editorial experience is evoked only to confirm the contention that an effort to improve veterinary literature has become a necessity. It may appear arrogant to declare that the quality of our veterinary service has outpaced the quality of its literature but that seems to be the case. The ability to pass judgement on the former does not, however, qualify one to judge the latter. The study of language is pretty broad. Moreover, as the volume of material published by the Association increases and its sources multiply in number and kind, the lack of rules on the general subject of writing and the adopted usage of its journals has become more and more apparent. The gap is a handicap to authors, editors and readers and should, therefore, be filled.

This effort to fill the gap is predicated on the theory that the general population measures the standards of an applied science by the literary quality of its publications. When printed material has been distributed it becomes an irremovable record of faults as well as of achievements. Whatever is printed is *there* for all time to come. Those who distribute the technical literature of a profession, therefore, assume a tremendous responsibility. Granted this to be true, the adoption of "Publication Rules" for the guidance of publishers becomes a fundamental obligation of the national association. Matters seemingly more imperative have kept good writing in the background in the veterinary profession. The oversight was not wise for a profession seeking public favor in its effort to carry on efficiently. While the meanest fiction can be cloaked in good usage, poor form depreciates the value of the best factual article. Excellence is not expected. Whole centuries produce but a few good writers. Science counts its literary experts on the fingers of one hand. Obedience to the simple rules of composition and the special rules adopted by the publication to which manuscripts are sent is the publisher's desire.

Style is the author's choice, yet every profession and trade develops a style of its own in spite of itself, because style among untrained writers comes from association with others of the same field. A profession cuts the pattern and its members imitate, unconsciously. The trend is downward if not shored. There is an established style followed in the literature of medical science. It follows certain patterns which custom approves but is systematically guarded against decline. Notwithstanding that a piece of literature is a one-man artifact and in medicine, writing has the background of the old authors, yet planning improvement has not been neglected in recent years.

Veterinary literature also has ways of its own which must be protected against violation of conventional usage. Every profession has its own language and vocabulary. In ours there are age-old words and phrases, many species of animals and plants and many uses of them, together with numerous industries, which give multiple ramifications to veterinary literature. Its complexities baffle the best nosographer and raconteur. Our colloquial terminology alone will require years to reform, if reformation is undertaken in the effort to remove the

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vulgarities of our everyday writings and speech.

The object here is to point out mainly the typographical usage adopted, not officially by the Association, but within its editorial rooms. Of the controversial nature of even this small detail of the task we are fully conscious, and as stated above, we do not claim any degree of qualification above the level of everyday editorial observation.

Let it be further understood that this is a primary effort at a great reform. As the sprinter would say, it's a start from scratch, recommended as a step to be taken as seriously as getting up the technical programs, the holding of conventions, and the collecting of dues. Writing is not as easy as talking because the wise man talks only about things he understands while writers are still inclined to venture "where angels fear to tread." Writing is awkward through life because it gets a bad start. The eighth grade pupil writes about topics he knows little about and, therefore, has the onus of exploring a new subject and learning to write at the same time. Exposition and description are difficult until experience and observation come to the writer's rescue, and they comprise practically all of veterinary literature. A practitioner, for example, can easily describe the symptoms he saw, the diagnostic methods he used, the treatment he employed, and the lesions he found *post mortem*. But the same event written from intercourse loses caste and scientific value. Every titbit of observation set down in writing adds to the sum of scientific knowledge, whereas trying to reproduce the thought of others may lead to confusion. "An ounce of fact is worth a ton of theory"[1] is a wise axiom. Writing and talking are man's modes of expressing ideas, and ideas can come only from one of three sources: (1) *experience*, (2) *imagination*, and (3) *intercourse* (reading and listening).

1. *Experience.*—Expressions from experience are derived from (a) original research, or investigation, (b) clinical work and observation, and (c) professional, social, or commercial relations. This group comprises nearly all of the trustworthy material of veterinary literature.

2. *Imagination.*—Articles based solely on imagination are of little use in scientific literature because mentally-generated ideas are liable to be misleading. While such articles may arouse interest and even action, they are seldom seriously entertained in the study of medicine. Exceptions are made in the writing of a presidential address or an editorial on a professional subject since, in that event the author may be expressing himself, not as a scientist, but as a citizen. Here authors can, and generally do, give way to Alexandrine elegance and colloquial arrogance to the heart's content without violating the tenets of medical writing. The so-called low colloquial terms and slang are out of place in scientific literature.

3. *Intercourse.*—It is difficult to avoid plagiarism in writing from intercourse. The pillage of words, phrases and ideas lowers the author's standing in the reading world. Out-and-out plagiarism is reprehensible. Only common knowledge can be drawn upon without risk of indictment in this respect, (*vide*, references), yet some authors are liable to go too far in regard to giving credit. There is no point to giving references not actually read in writing the manuscript. Veterinary authors of this period are particularly censurable in regard to both the misuse and overuse of references.

In general, the desirable article is the one written from experience in simple, plain, matter-of-fact language, free from levity, offensive slang and grandiloquence; and in which the mechanical capacity and usage of the journal to which it is sent, is respected.

At this point a few words on illustrations are in order. Picture making and picture printing are important in medical writing. There is a lot to learn about illustrating, all the way from the click of the camera to the inking of the press and the effort to illustrate the right part of the text. Effort No. 1 is to impart worthwhile information. Pictures should be original, the captions lucid, and the effect of reduction accounted for.

[1] *Medical Writing* by Morris Fishbein and Jewel Whalen, 1938, page 10.

Max Brödel (*J.A.M.A.*, Aug. 30, 1941) in an article entitled "Medical Illustration" emphasizes that medical illustrators have learned how to plagiarize, some cleverly, some clumsily, without pretense to credit the original artist. Illustrators, not having kept pace with the science of medicine, tend to copy the work of others. The photograph is replacing the hand-made picture, but it does not "analyze, interpret or teach" as does the latter, this author contends.

The fine wood engravings of the early veterinary text books are examples of art work done in the presence of the model. There was an abundance of cadaveric material not available to the medical field when meddling with the dead was unpopular or forbidden. Copper and zinc engraving and later photomechanical methods brought an end to the wood cuts of Garsault and Solleysel (early 18th century) which left little to be desired in the early studies of veterinary anatomy.

Illustrating technical articles is a serious matter for veterinary journals because there is no modern method of engraving to replace the drawings of artists who understood the author's needs, and we have but few authors who can afford the luxury. As a matter of fact, until special draftmanship is taught in the veterinary college, publishers of veterinary journals will not be able to improve their illustrations to the highest degree of excellence. Some veterinary schools are now paying considerable attention to drawing as evidenced by several articles we published last year.

Pictures (photographs, roentgenograms, charts, photomicrographs, pencil drawings) are appreciated, provided they actually illustrate some part of the text to be emphasized. Sometimes, as *Medical Writing* states, "one small picture may convey more to the reader than could be explained in several pages of text matter." The cost, however, must be considered by authors wanting their articles profusely illustrated. Although never demanded by the AVMA publications, it is not unusual for medical writers to pay a part of the cost when they insist upon the use of an unusual number of pictures.

The whole subject of illustrating medical texts is too vast to cover in this brief. The following, however, require attention:

1. Do not attach pictures to the text matter. Send them in a separate envelope, enclosed with the manuscript.

2. Number them serially as figure 1, figure 2, etc. and indicate the top or bottom of the picture, writing lightly but plainly with lead pencil on the back.

3. Write the captions and identify them on a separate folio. There is no more reason for crowding caption material than the text itself. Do not paste the captions on the back of the picture, nor fasten them to the picture with paper-clips. The creasings caused by clips are difficult for the engraver to remove. Many photographs are spoiled by paper-clips even when a piece of paper is used as protection against creasing.

4. In sending illustrations of any sort, keep the dimensions of the pages in mind and calculate the effect reduction will have on the clarity of the reduced picture. This is particularly true of roentgenograms, many of which have but little meaning when reduced.

5. Photomicrographs have but little meaning to the average reader unless the author indicates with darts or figures just what he is intending to portray. Explanatory captions are particularly necessary in microscopic illustrations. The exact magnification should be shown.

6. Charts containing numerals, letters or words must be drawn with the effect reduction will have on their readability.

PUBLICATION RULES OF THE AVMA

Readers of the AVMA publications who follow the trend of the Association's development in size, in influence, and in the expansion of duty to the country must have noticed the ever-increasing volume and variety of material published, the improved appearance of its journals and the excellence of the articles accepted. But, what may have been overlooked is the fact that these changes were brought about without adding to the Association's office personnel. Some midnight oil had to be burned. Three typewriters were installed in the homes of that many employés to maintain the literary front required in the drive to the profession's objective. The experiences have led to a step too long postponed, namely: rules for the guidance of contributors that will not only improve all aspects of the finished journals but also

save a lot of time for the editors. Remembering that ours is a relatively small profession engaged in the difficult task of publishing literature comparable to the standards of medical writing, the need of such rules are self-evident.

In the process of readjustment, readers have noticed that the issues of the journals have sometimes appeared late.

While the causes of some of these delays were late arrivals of material relating to the preparedness program, the time consumed in editing and in upsetting the printer's schedule, are the constant factors that obedience to these rules aims to amend.

At the present time we are more concerned in the preparation of manuscripts in such a way as to aid the editors and printers than in the orthodoxy of English composition, although both of these are vital to the saving of time and effort and to the production of a current literature that will not sacrifice the influence that the veterinary profession is struggling to maintain. The following rules are set down with these objects in view:

MANUSCRIPTS

1. To help editors save time in rewriting, to prevent errors, to obtain early attention, and to avoid rejection, do not write in single-space typewriting.

2. Write in double or triple spacing and leave wide margins on each side of the folio.

3. Hand-writing is always difficult to transform into printer's copy. When used, the same rules for lineal and marginal spacing apply and great care should be taken to make the manuscript readable. Dot the "i's" and cross the "t's", but better still, have the copy typewritten.

4. Use standard letterhead paper (11" x 8½"). Legal cap or small folios are not desirable for filing in standard cabinets. Do not use thin paper.

5. Check carefully for grammatical errors, confusing syntax, incorrect numerals, misspelled words, and superfluous phrases.

6. Carbon copies are not acceptable unless accompanied with statement that the article has not been sent to other journals.

TITLES

1. Titles should be short but inclusive. Long titles are as objectionable as nondescripts.

2. In choosing a title, the aim is to declare the general nature of the text and as much about its scope as brevity permits.

3. By nondescripts is meant such titles as "A New Drug," "A Difficult Operation," "A Practical Suggestion," etc., which mean exactly nothing in an index. They add nothing to the literature nor to the author's reputation. Equally out of order are such titles as "Diseases of Swine" for an article covering but a part of the subject indicated.

4. Long titles are not "topographically" elegant and complicate indexing.

5. The author's name, and those of junior authors, should include post office address, position held, and college degrees. The latter are insisted upon in AVMA publications to distinguish veterinarians from others.

6. Names of authors at the end as well as at the head of long articles are desirable.

ABSTRACTS

1. For the *American Journal of Veterinary Research*, an abstract of no more than 300 to 350 words should accompany the manuscript. These are published in *Biological Abstracts* which periodical insures world-wide attention.

2. Abstracts of articles to be published in the *Journal of the American Veterinary Medical Association* are an advantage to the author. They are convenient to pass on to scientific and lay periodicals interested in veterinary science.

REFERENCES

1. Only references identified by superfigures in the text will be published. These will be printed at the bottom of the column on which the superfigures appear.

2. The style now in use will be continued: (1) the name or names of the author or authors with the Christian name or initials after the family name; (2) the title of the article referred to; (3) the identity of the journal, the issue, and pages where the articles appeared.

3. Do not crowd reference material with single space typewriting. In view of the fact that various styles of references are used by medical publications and changes must, therefore, be made to conform with the JOURNAL'S style, the single spacing of this part of manuscripts is particularly objectionable. Many articles otherwise typographically proper end with a long list of references which have to be rewritten because of single spacing and not having followed the JOURNAL'S style. The style, for example, is as follows:

[1]Newmann, J. S., M.D., D.V.M., and Halstead, S. P., Ph.D.: Brucellosis in Swine, New England Veterinarian, xxvi (July, 1940), pp. 362-368.

The separation of *common knowledge* that need not be accounted for from the *special knowledge* that the author acquired from the literature of this period for which

due reference should be made can only be achieved from a broad knowledge of the subject at hand and of the whole science to which it belongs, hence the significance of the selection and the printing of references. One writing on rabies, tuberculosis, asepsis, piroplasmosis or hog cholera would be absurd were he to identify the articles where Pasteur, Koch, Lister, Smith or Dorset recorded their work on these subjects. Their work resides in the fund of common knowledge and needs no identification. Less remote material, to avoid the charge of pillage can be well enough identified as "Mohler, 1910," "Carrel, 1917," "Mayo, 1926," etc., rather than by naming the volume, number, and page of a periodical which the reader has but little chance to consult. Except for articles on bibliography *per se* there is a certain amount of affectation in piling up a long list of references that will serve no other purpose. The advice here is to be practical—informative—and by no means indulge in "reference plagiarism." In the writing of books, no restrictions seem to be placed on authors in regard to the number of references. As a book is in fact a reference itself, extensive bibliographies are desirable. They indicate when and by whom the subject was discussed.

Inasmuch as the profession has never adopted official abbreviations for the names of its periodicals, there is no objection to using the whole name of the publication or of abbreviations that are not confusing. The lower case roman numerals for the volume, the date plainly parenthesized as to month (day if necessary) and year is the JOURNAL style. Although the particular pages are redundant, custom prevails.

ABBREVIATION AND PUNCTUATION

As this is not a lesson on usage in these respects, it suffices to point out certain places where contributors may help the editors:

1. It is customary to eliminate the hyphen as much as is consistent with good usage, *e.g.* nonimmune, purebred, feedlot, hookworms, etc., and to connect with the hyphen all compound nouns used adjectively such as in farm-animal diseases, cow-stable infections. Adjective-noun compounds used as adjectives are not hyphenated, *e.g.* small animal practice, large animal research, etc.

2. The plural of weights and measures is abbreviated in the singular form: lb., pt., oz., gal., gr., instead of lbs., pts., etc. The same applies for metric units: cc., mg., mm., Gm. The capital "G" is used to abbreviate gram in order to prevent confusion with "gr."

3. Percentage is indicated by the two words "per cent" instead of the solid form "percent" or the mark "%". The per cent mark is used only in tables and occasionally in a parenthesized repetition such as "350 head (25%)". It should never be used in running text material such as "The outbreak showed a mortality of 30%."

The JOURNAL continues the use of italics for naming two-word parasites (metazoan, protozoan, bacterial) indicating the genus and species (*Ascaris lumbricoides, Eimeria avium, Brucella abortus*). When used again in the same article the genus is abbreviated, care being taken not to use misleading abbreviations, such as B. for Br., S. for Str. etc. When a new species is introduced into the text, the genus is again spelled out.

TABLES

In making up tables authors are admonished to consider the dimensions of the JOURNAL'S pages (=8″ x5½″). Tables that have to be set lengthwise of the page, though used on rare occasion, are disapproved. Tables are intended solely to condense text material, never for the purpose of introducing new material. Figures on tables should be carefully checked against figures and statements in the text. Editors are justified in regarding errors in tables as pardonable on their part, although checking tables against the text is admittedly a part of editorial work.

SUMMARIES AND DISCUSSIONS

These are particularly desirable for a journal of veterinary medicine as hints to read or not to read the whole text. The summary, therefore, should be quite inclusive.

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When an article is formally accepted for publication in addition to the routine postal card acknowledging its receipt, it is held to be subject to the Association's copy-

right. Papers read at meetings, transcripts of impromptu addresses, and discussions are held to be the exclusive property of the Association and, except by consent of the Board of Governors, it may not be published by others. All journals will appreciate being informed that an article has been sent to other journals.

Naturally, the editors have their notions as to all of the other punctuations and abbreviations which can not even be approached in this brief. Writing a book entitled *Veterinary Medical Writing* comparable to *Medical Writing* published by the American Medical Association for the medical profession is among the unfinished duties of the AVMA.

Suggestions from readers and criticisms are appreciated and they are filed for future use.

It is recommended that the duties of the Special Committee on Nomenclature of Diseases and Vital Statistics be extended to include medical writing and that the "Publication Rules" of this paper be adopted by the Association subject to such changes as may from time to time be recommended and approved.

[The first of a series on the Art of Veterinary-Medical Writing. Other installments will be published in future issues.]

Scientific Papers Are "Audience Enemies"

John D. Lucke (*Science*, Apr. 10, 1942) commenting on an article on the reading of scientific papers by Dr. Eugene F. DuBois,* professor of physiology, Cornell University Medical School, says in part: "It is bad enough for a teacher to read verbatim to students. They at least have some reason for listening. But for a scientist to address an audience of his peers, no doubt including many of his betters, by literal reading from typed pages, is gross discourtesy. Societies are partly to blame for this widespread 'audience enemy'." The commentator goes on to explain that in reading typewritten pages word for word, the authors speak in language intended for publication, not for oral expression.

*Science, March 14, 1942, pp. 273-274.

In 1939, the AVMA began to discard the reading of long papers from the programs of its annual sessions. Since then our literati have been invited to "present," not to "read," their text material. The reform, which is truly in keeping with the modern custom of the best scientific societies, was started in the Section on Research at the Memphis (1939) meeting, and was extended to the entire program of all the sections for the Washington (1940) meeting.

Reporters present their papers in the form of time-limited lectures in which the salient points of the ground covered in them are briefly told in such a manner as to elicit discussions. The audience is prepared through printed abstracts given out to all members at the time of registration. The papers are published in due time in full. Thus, authors writing papers for an AVMA convention are not constrained to "clock" their manuscripts to the detriment of thorough coverage of their subjects. The sum of results is a more complete account of the year's work in the Association's records, but not to be slighted is the more agreeable meeting the plan assures to those who attend. The painful hours spent in trying in vain to follow the reader of papers on technical subjects, which should be read and studied in the seclusion of one's den, detract from the delight of a convention.

Organize or Perish

Guarding nine billion dollars worth of domestic animals from being practically wiped out by disease can pass almost completely out of the hands of the profession which veterinarians maintain. It is falling into the command of outside agencies because the guardianship is too widely open to exploitation for a half-organized group of veterinarians to keep under their control. Veterinary association work has become pretty much of a case of "organize or perish."

Veterinarians are just beginning to catch up with the *spirit and power of organization.* Remember, "just beginning!"

SURGERY & OBSTETRICS

AND PROBLEMS OF BREEDING

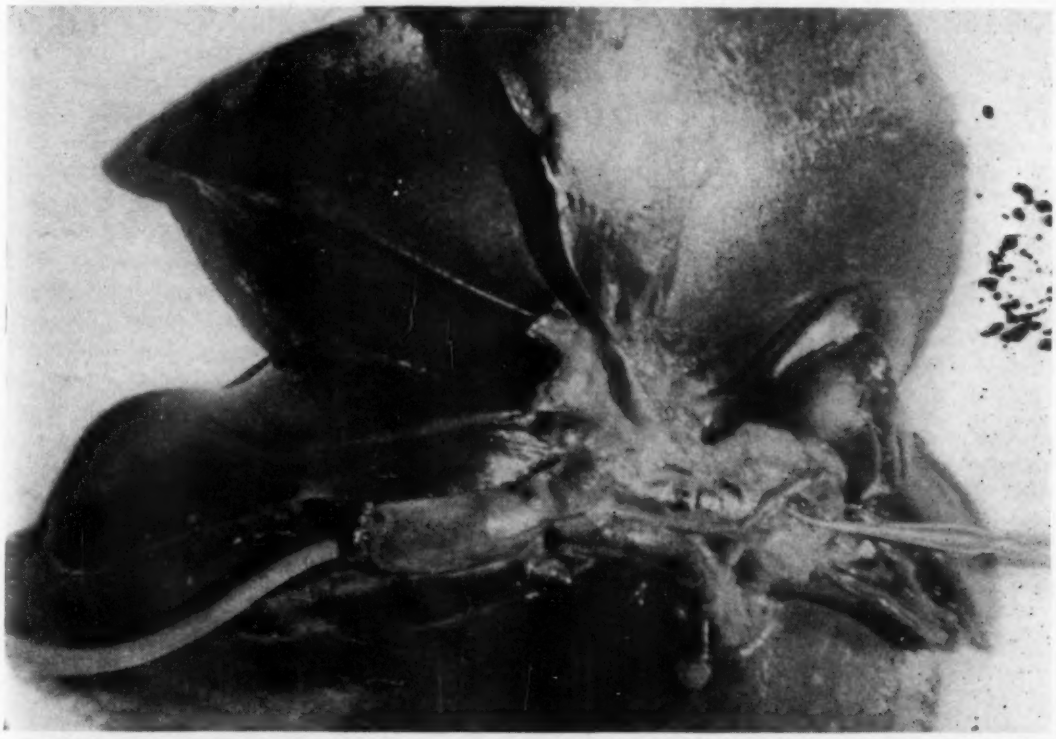
Gallstones in a Dog

MILDRED E. DOSTER-VIRTUE, M.D., AND ROBERT W. VIRTUE, Ph.D.

Denver, Colorado

IN THE COURSE of preparing a bile fistula in a dog, an attempt was made to aspirate the bile from the gallbladder. Although there appeared to be a large amount of bile in the bladder, very little bile could be drawn into the syringe. It was found that the difficulty was caused by several small concretions which plugged the needle. The literature records but few cases of gallstones in the dog. No references could be found as to the numerical spontaneous incidence of gallstones in the canine species. Hosper[1] has reviewed the experimental production of gallstones in various domestic animals. Friedberger and Fröhner[2] stated that gallstones occur more frequently in the dog and ox than in other domestic animals. Hutyra and Marek[3] say stones occur more rarely in the dog than in the horse and ox. Parascondolo[4] operated successfully on a male English hunting dog which had shown signs of icterus. He reported the re-

From the Department of Chemistry, University of Denver.



Dog liver with gallbladder removed and rubber tubing fastened in the cystic duct; stones at upper left came from the gallbladder. Actual size.

moval of some hard stones of variable size and smaller calcarious concretions from the gallbladder, but gave no information as to analysis of the stones. Schlotthauer and Stalker[5] reported two cases of gallstones in dogs, both of which produced pigment type stones. One dog was found to have organs which were grossly normal and stones were found only in the gallbladder. The other dog had a distended bladder with a large area of hypertrophy of the mucosa. The bladder wall was found microscopically to have papillary adenomatous hypertrophy. Sandlike concretions were palpated in each lung, and a stone was found in the pelvis of one kidney.

Case report.—The dog was a 50-pound female English Setter which appeared quite healthy prior to the operation. The gallbladder was grossly normal and the presence of stones was not suspected before attempting to draw bile from the bladder with a syringe. The full bladder was removed from the animal and a fistula established. The bladder was found to contain viscous bile and more than a hundred soft particles which were about 2 mm. in diameter. The larger ones were about 4 mm. long. As little bile was secreted during the five days after establishing the fistula, the dog was killed. The biliary tract, liver and kidneys were examined microscopically, and the other organs grossly. Particles were found throughout the entire biliary system that were similar in nature to those found in the gallbladder. Analysis of the stones revealed much biliverdin and a small amount of bilirubin. There were traces of iron, calcium and phosphates present, but no cholesterol nor bile salts. After extraction of the soluble materials with alcohol, ether, weak acid and base, a black unidentified substance amounting to about one-fifth of the weight of the original material remained. Microscopic examination* of the bile ducts, liver and gallbladder afforded no evidence of the pathology. The accompanying photograph shows the liver of the dog with the catheter tube fastened in the cystic duct, and some of the stones which had been in the bladder. Dilatation of the bile ducts after attempting to establish the fistula is apparent. The bladder, of course, had been removed.

Dr. R. W. Whitehead of the Medical School of the University of Colorado permitted us to use the animal quarters of that institution.

*Dr. W. C. Black, Jr., of the School of Medicine of the University of Colorado, examined the several specimens mentioned.

[1]Hospers, C. A.: Arch. Path., xiv (1932), pp. 66-78.

[2]Friedberger, F., and Fröhner, E.: Veterinary Pathology (6th Edition, London, 1908), i, pp. 280-282.

[3]Hutyra, F., and Marek, J.: Special Pathology and Therapeutics of the Diseases of Domestic Animals, ii (1926), pp. 428-431.

[4]Parascondolo, C.: Arch. f. wissenschaft. u. prakt. Thierheilkunde, xxvi (1902), pp. 484-495.

[5]Schlotthauer, C. F., and Stalker, L. K.: J. Am. Vet Med. Assn., lxxxviii (1936), pp. 758-761.

Shock*

There is confusion as to the definition of shock. While some use the term for any illness associated with injury, others reserve it to designate the grave circulatory breakdown or intermediate state that is manifested by low blood pressure, thready pulse, peripheral anemia, cyanosis, cold sweating, shallow breathing, lowered sensibility and general collapse of all vital functions. The majority regard any pronounced lowering of blood pressure following serious injury as shock, whether or not any one or a combination of these manifestations predominate.

[In animals, the thready pulse of an injured subject is a bad omen and associated with any one of the above-named phenomena, there is reason to take prompt steps to prevent the whole chain from developing into a hopeless collapse.] Obviously, the injured subject in a state of shock is a bad surgical risk. If there was considerable blood lost, so much the worse. The gravity and extent of internal injuries are not easily appraised. Their nature develops later. Nor is it generally easy to determine the amount of blood lost, internally or externally. In giving restorative drugs hypodermically, the low absorptive power of the shocked patient must be considered. Rest, warmth, fluids by mouth and rectum and intravenous administration of blood or blood substitute, rather than adrenalin, pituitrin and morphine, are employed as the initial treatment. When there is doubt as to the amount of blood lost, it is better to err on the side of transfusion than to risk waiting too long.

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*Abstract from Proceedings of the Royal Society of Medicine, xxxv (Apr. 1942), p. 445.

The Spaying of "In-Milk" Cows

The advantages of spaying milk cows to prolong, without interruption, the period of lactation and the technique of the operation as described by R. A. McIntosh (*Can. Jour. of Comp. Med.*, July, 1942) revives the question of ovariectomy in milk production, a well known but never widely practiced procedure that removes the necessity of interrupting lactation by breeding, prolonging the period of profitable milk production indefinitely and producing a beef animal of high grade when milking finally ceases. Spayed cows will go on producing paying quantities of milk for three or four years without a let up, and accordingly it will not be long before there is a demand for spayed milk cows, the author states.

Cows selected for the purpose should be 5 to 6 years old. The operation should be performed two to three months after freshening, the moment of maximum milk production. Without interfering with lactation, the genital organs atrophy and sexual activity ceases. Fattening follows dropping off of milk yield below the profitable level.

The operation is performed standing in the stanchion *via* the vagina and under epidural (caudal) anesthesia, precaution being taken to prevent the area anesthetized from extending to the limbs and thus put the animal off her hind feet. From 10 to 15 cc. of procaine (1%) is used. The technique of the vaginotomy is performed by holding the scalpel against the anterior wall of the vagina at the median line, an inch above the cervix, as the cervix, held in a long dressing forceps, is drawn backward to tense it. Thus, the scalpel passes through the vaginal wall. The opening is enlarged to admit two fingers. If the ovaries can not be picked up near the brim of the pubis, they are brought into the grasp of the two fingers with the other hand passed through the rectum and then drawn into the vagina to be emasculated with the spaying shears or ecraseur. No after care is required.

This is the time the country needs your help. Buy Defense Bonds and Stamps regularly.

Centenary of Ether Anesthesia: 1842

It was 100 years ago this year that ether anesthesia was first employed in surgery. To be exact, the date was March 30, 1842. The physician was Dr. Crawford Long, of Jefferson, Ga.; the patient, James M. Venable; and the operation was the removal of a cystic tumor on the back of the neck. A second tumor was removed from the same patient on June 6, of the same year. The third operation under ether was the removal of a tumor from the head of Mary Vincent of Jackson, Ga., on September 9, 1843. On January 8, 1845, Dr. Long amputated the finger of a Negro boy slave, the property of Ralph Baily, Esq., also of Jackson.

A certain amount of credit goes to Horace Wells, Hartford (Conn.), a dentist who experimented with ether in dental work in 1844. But it was Dentist W. G. T. Morton, of Boston, who first demonstrated ether anesthesia in public. The place was the Massachusetts General Hospital and the date October 16, 1846. It was here that Oliver Wendell Holmes coined the word "anesthesia", and made the historic remark, "This is no humbug". Thus, the greatest discovery of all time was made during the decade of 100 years ago.

Mammary Actinobacillosis Responds to Sodium Iodide

Since antinobacillosis is common in this district, you may be interested in cases of the mammary type which responded promptly to an intravenous injection of sodium iodide.

A year ago last January, when called to treat a case thought to be acute mastitis, I found a badly swollen udder and one quarter very tender to the touch. There was a slight rise of temperature and inappetence. A dose of sodium iodide (1 oz. in a pt. of water) was injected intravenously. In a few days the owner reported that the swelling had disappeared but that the quarter was drying up. In February, there were two more cases of the same kind in the herd, and besides, another cow had a lump in the throat. All three were treated in the same way and they all cleared up. In April, the

owner, troubled over the prospect of going broke, reported that five more cases of mastitis had developed in his herd of 31 head, in addition to two heifers that had never been bred. One of the heifers was affected in one quarter and the other in two quarters. It was then decided to give the sodium iodide treatment to the whole herd. I see the owner frequently and at this time (July, 1942), he reports that there has been no further trouble.—*G. G. Potter, V.S., Saskatoon, Sask.*

[Although the diagnosis was not confirmed bacteriologically, the Doctor's familiarity with actinobacillosis and the throat involvement in one of the cases would seem to justify the diagnosis made. The results of the treatment corresponds to those frequently reported from the intravenous injections of sodium iodide signalized by Farquharson.—Ed.]

Horses Do Swallow Wire

That the bovine ruminant has no monopoly on the swallowing of wire is again proved by a report of G. W. Rawson, D.V.M., of the Animal Industry Department of Parke, Davis & Company who reports that a Percheron mare on his father's farm near Fredericksburg, Va. some years ago was the victim of that accident. To quote: "In reviewing the March issue of the *Journal of the American Veterinary Medical Association,* I read with much interest the case report of C. B. Allen, M.R.C.V.S., Devon, England, in which he describes finding five inches of wire that had perforated the duodeneum of a mare. Following the description, the editor calls for similar reports in consideration of the fact that swallowing metallic objects is rare in the horse. In compliance with this request, I think an experience I had several years before I decided to study veterinary medicine may be of interest.

On my father's farm near Fredericksburg, Va., we had a Percheron mare. One day, I noticed a small lump on the left side near the region of the stomach. After feeling this, a hard, pointed object was detected that looked like the end of a piece of wire. The end was grasped with a pair of pliers and over 12 inches of stiff wire was removed. The mare seemed to be in perfect health and showed no symptoms that I can remember. How this wire got into the mare's body or its exact location is still (and probably always will be) a mystery to me."

[Besides the case reported by Allen in *The Veterinary Record* which was mentiond in the March issue of the JOURNAL, Innes, of Minnesota (THE JOURNAL, May, 1942, p. 436) reported a case in a 7-year-old gelding wherein a swallowed wire 4 inches long had perforated the spleen. Thus, within the calendar year come three reports to the effect that "Horses do Swallow Wire."—*Ed.*]

Calfhood Vaccination and Other Things

The program of handling farm-animal diseases through the instrumentality of farm hands and druggists is particularly ill-advised in the case of bovine brucellosis. Here, the money making argument of the drug trade is not likely to increase the purchasing power of its customers. Certainly, if the drug trade's notion of disease control in animals gets momentum (but it won't), there would be little use and less common sense in trying to eradicate such diseases as bovine brucellosis. So long as the government and state officials are not ready to say by whom and just where abortion vaccine, of calfhood-vaccination fame, shall be used, the cattle folk might as well get resigned to forever live with their brucellosis and quit spending the taxpayers' money on federal and state veterinary doctors. As C. R. Donham tells the readers of *Hoard's Dairyman,* "If we use it (vaccine) as a substitute and abandon the rest of the program, we will then have adopted the philosophy of living with Bang's disease." But, why not call things by their right name? The public is pretty deaf when science speaks about the details of livestock sanitary police work. True and understandable as it is, Hitler's legions are not hungry because farm-animal and ordnance production were developed side by side in preparing for the big parade. So,

why not call all this playing fast and loose with the country's farm animals precisely what it is—quackery we are unable to control, because—(write your own answer).

Human and Animal Brucellosis

As late as ten years ago the relation of undulant fever and Bang's disease, as brucellosis is commonly named, in two susceptible species (man and cattle) was still confusing. Capable authorities were contending that *Brucella abortus* Bang was not pathogenic for man. Only the melitensis variety of the genus was indicted as the cause of undulant fever of the human being.

The work of Alice Evans (USBAI), Huddleson (Michigan), Carpenter (New York), Hardy (Iowa) and Thomsen (Denmark) clarified the situation. The latter,* through examinations of 333 persons, established contact with cattle as a hygienic problem in this respect. He showed that while veterinarians at the time of leaving college were free of the infection, 10 to 20 per cent reacted to the agglutination test after being in practice for a while. In one group of eleven veterinarians out of school but a month, five reacted. Since then (1931), enough evidence has been accumulated to justify expansion of bovine brucellosis eradication on a nationwide scale as a public health measure. All doubt as to intertransmissibility has been removed.

Iodine and the Thyroid

The thyroid gland is not essential to the utilization of iodine as was formerly supposed. Thyroidectomized animals lost weight, utilized their food poorly, drank more water and had a low metabolic rate when kept on diets low in iodine. But when adequate amounts of iodine were given their condition improved. The body appears to have the power of converting iodine into thyroxine.—*Asher S. Chapman, Mayo Clinic, Science, Nov. 14, 1941.*

*Journal of Infectious Diseases, xiii (1931), 484.

Transplacental Passage

Experimental inoculation of incubating hen-egg embryos demonstrating the susceptibility of avian cells to infectious agents (viruses, bacteria, protozoa, fungi), has shed light on the relative resistance of embryo and adult to them in avian and mammalian hosts. While chick embryos are susceptible to the action of some viruses they are refractory to others, and the same fact applies also to the mammalian fetus. Though knowledge about transplacental passage of particulate matter is not complete, there is much evidence to show that neither toxins nor foreign proteins ever pass the hemochorial barrier; yet, on the other hand, antitoxins, agglutinins, hemolysing, and antiviral bodies do readily pass through it. There is, however, no general theory of placental permeability. Whether the barrier is a filter or possesses a secretory function is not precisely known.

Among the known intrauterine virus infections are chicken-pox, smallpox, measles, and (rarely) mumps, influenza, yellow fever, encephalitis and rabies. In fact, virus infections are readily transmitted from mother to fetus. One of these is virus abortion of mares [Dimock], in which the mother shows but little evidence of disease or pathogenesis of her infection, notwithstanding that the fetus is infected and the virus can be transmitted to pregnant mares experimentally.

Bacterial infection (of the placenta) occurs in brucellosis. Here, as was shown by Theobald Smith, the structure of the chorionic epithelium becomes densely packed with the organisms, but only the chorionic membrane is involved. Obviously, the bacteria enter the utero-chorionic space *via* the mother's circulation and are held at that level. By the same token, the fetal membranes may furnish the medium for bacteria and viruses of certain types.

Most mothers are immune to the great contagions of youth and because the fetal membranes are in close contact with the mother's blood, it is fortunate that antibodies pass to the fetus through them and the infecting agent itself can not surmount the barrier. In animals that do not pro-

tect their fetuses with immune bodies, these are provided by colostrum and milk. It is surprising to find so little knowledge of placental infections and the specific resistance of fetal membranes. [*Goodpasture, Ernest W., Department of Pathology, Vanderbilt University Medical School: Virus Infection of the Mammalian Fetus, Science, xcv (Apr. 17, 1942), pp. 392-396.*]

Cancer of the Thyroid in a Dog

The subject was a Pekingese, 13 years old, suffering from a goitrous condition of a year's duration. Except for gagging, the dog was in excellent condition. Although an unfavorable prognosis was given, the owner insisted upon removal, nevertheless. The enlargement consisted of three oval masses, the largest of which measured 7.5 cm. in diameter, the smallest 4 cm. To the largest one, there was attached an elongated structure 4x2x3 cm. Though the dog died under the nembutal-ether anesthesia the growth was resected *post mortem* for examination.

The tumor had a nodulated surface which on section showed granular, opaque, yellowish-gray zones with irregular hemorrhagic spots. Microscopically, the nodes were found to be composed of poorly encapsulated, neoplastic tissue arranged in solid masses presenting predominently small acini, a few of which contained colloidal and papillary structures. The cells were polyhedral, varied but little in size, and contained moderate amounts of vacuolated cytoplasm. The nuclei were small, round, and hyperchromic. Though there was some vascular invasion, mitotic figures were rare. The neoplastic tissue was transected by connective trabeculae of varying width. There were large foci of acellular, coarsely reticulated tissue and necrosis containing cholesterol crystals.—*Lt. Sidney L. Kaplan, V.C., U. S. Army.*

Shock was named and first described as an entity by James Latta of Edinburgh, Scotland, in 1795.—*From Therapeutic Notes.*

Osteoarthropathy in Dogs

E. G. White, Ph.D., M.R.C.V.S., of the Research Institute, Royal Veterinary College (London), writes: "In the April issue of your Journal there is an article[1] describing a case of hypertrophic pulmonary osteoarthropathy in the dog in which it is stated that no previous observations have been reported in the English language, yet some reports have been published by Italian and French authors. Again, the authors emphasized that "not a single report has been discovered in English veterinary journals." May I report that the condition has been reported in British journals and quite recently.

"In 1929, Smythe in an article on tuberculosis in the dog, published in the *Veterinary Record* showed photographs of the lesions which were apparently considered tuberculous in nature. In the same journal, in 1937, Woodridge and Holmes described a case of tuberculosis in the dog in which osteoarthropathy was present. The dog was brought to the Royal College in London, and I prepared the autopsy report. In 1940, in the *Veterinary Journal,* Innes published an article on the pathogenesis of osteoarthropathy in domestic animals in which he illustrated two cases of osteoarthropathy in dogs with tuberculosis and also referred to the literature referring to the condition. In addition to the papers by French and Italian authors referred to in the article in your journal, there have been a number of articles by German workers, some of which are mentioned by Innes. Finally, Craig and Davis described and illustrated a case in the dog in the *Veterinary Journal* in 1940. I have myself come across three cases among a total of 32 dogs affected with tuberculosis. One of these cases was illustrated by Innes, one is the case reportd by Woodridge, and the third has not been reported.

"May I have the opportunity to report a fourth case which, like the case described by Poley and Taylor was associated with neoplasm. The dog was a 5-year-old Fox Terrier, male, which had shown lameness in the right hind leg for five weeks prior

[1] April 1942, p. 346.

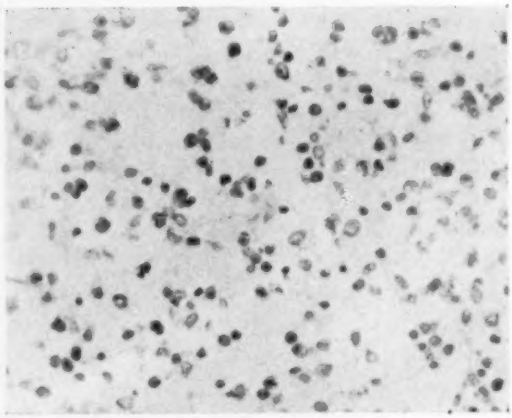
to admission to the Royal Veterinary College. Radiographs showed periosteal bone deposits at the distal end of both femurs. The subcutaneous test was negative. The autopsy showed neoplasia of the liver with extensive spread throughout the intrahepatic branches of the portal vein and secondary lesions in the hepatic lymph nodes. The tumor was identified histologically as a primary adenocarcinoma of the liver. The lungs were normal except for a few areas of collapse. Dissection and maceration of the skeleton showed generalized osteoarthropathy, the periosteal deposits on the right femur showing bone marrow between it and the shaft. Perhaps, this case and the one so fully described by Poley and Taylor, will stimulate others to look out for this condition and endeavor to elucidate its etiology. I am not aware of any successful attempt to reproduce the condition experimentally."

Reticulo-Sarcoma in a Jersey Cow

The subject was a 7-year-old grade Jersey cow, inspected by B. A. Taylor, veterinary inspector of the Port City (Texas) stockyards and slaughtered under the supervision of D. C. Becker, J. Van Eenenmann and E. G. Pigman, B. A. I. inspectors of Houston, who credit John H. Milliff for the histological report and the photomicrographs.

—*After Milliff, 1942*

Fig. 1—Showing destruction of the normal architecture of the affected lymph nodes from the diffuse growth of cells. X 100.



—*After Milliff, 1942*

Fig. 2—Showing preponderance of reticular cells over lymphocytes and the small amount of stroma.

The antemortem examination showed enlarged prescapular and precrural lymph nodes, respiration 57 and shallow, temperature 102.6 F., and fair physical condition. The postmortem examination disclosed enlarged visceral and body lymph nodes, grayish white, moist, and smooth on section; spleen normal; liver slightly enlarged; heart soft and flabby; musculature pale; and fat of gelatinous appearance.

The histological examination revealed complete loss of normal architecture of the affected nodes, some of which showed a diffuse scattering of various types of cells among which were small lymphocytes, monocytes, neutrophiles, and fibroplasts, all greatly outnumbered by reticular cells. Mitoses were numerous. Some of the glands showed coagulation necrosis and caseation with calcification along the cellular outlines. The diagnosis was reticulosarcoma.—*E. G. Pigman, Assistant Veterinarian, U. S. B. A. I., Houston, Texas.*

A Change in Color Pattern and Neoplasms in a High Producing Hen

Although incidence of neoplasms in fowls is high, the case here reported is interesting because an unusual change in color pattern occurred which was probably related to neoplastic tissue present.

The bird, a Barred Plymouth Rock hen of the North Carolina State College poultry flock, was hatched Feb. 24, 1939. During her pullet year she produced 319 eggs. As she was not mated, none of these eggs were incubated. In the course of her second year, the records indicate that she laid only 65 eggs. Six of these eggs were incubated, but the germs of the three fertile eggs died before the twenty-first day. The bird last laid in June, 1941.

During the early part of August, 1941, it was noted that the bird had developed a very unusual feather pattern (fig. 1), and in view of this she was segregated for observation. When the color change was first observed she was apparently in good health, but showed a tendency to remain apart from the flock. The bird was in good flesh and the appetite was normal. The feather pattern was not that of a standard bred Barred Rock, as many of the feathers, in particular the primaries and secondaries of the wings, were almost totally white. A large number of the body feathers had irregular barring, and many were white tipped. As a whole, the composite feather pattern resembled that of a mongrel hen with barred plumage.

When first segregated the hen was comparatively inactive and would stand for considerable periods of time without moving. As time passed, she became more and more listless, and toward the last, sat most of the time in her cage with eyes closed. She gradually became thin and lost the desire for eating. It is doubtful if she ate anything during the last ten days.

On Oct. 10, 1941, she was killed for autopsy. On opening the carcass, about 100 cc. of ascitic fluid were found in the abdominal cavity. The heart, lungs, and kidneys presented a normal gross appearance. The peritoneum and intestine were a mass of yellowish-white tumor tissue, and adhesions were so extensive that it was almost impossible to separate the various intestinal coils. Several large and discrete, bright-yellow neoplastic areas were present in the liver. The ovary apparently contained no normal follicular tissue and was slightly enlarged and pinkish-yellow in color. Several large pieces of old yolk material were present in the oviduct; the walls of this organ were thickened and apparently tumorous.

Although the histopathology of the lesions was not studied, the condition was diagnosed as lymphosarcoma, since in neoplasms of birds only a small percentage are not of lymphoid origin. As the presence of metastases indicated, the tumor was obviously malignant.

We are led to believe that the changed color pattern resulted from endocrine dysfunction which in turn was caused by the presence of a neoplasm. As plumage in birds depends greatly upon endocrine secretions, it is quite likely that a neoplasm involving one of the endocrine glands was responsible for the changed color pattern. Although the ovary was tumorous, it is unlikely that this tumor, on the assumption that it was a lymphosarcoma, was responsible for the color change since avian ovarian lymphocytoma are very common.—*D. W. Gregory, Department of Poultry Science, North Carolina State College.*

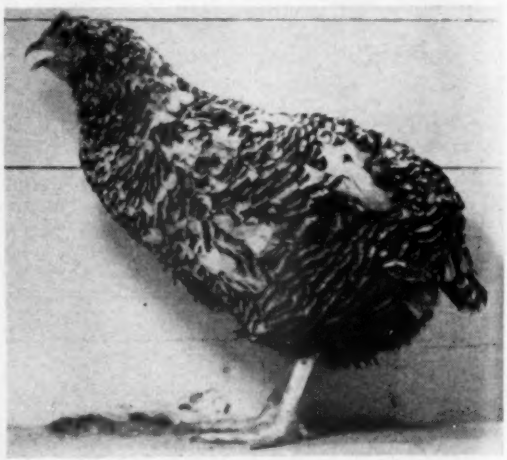


Fig. 1—Photograph of the hen herein described taken Aug. 6, 1941.

CLINICAL DATA

Some Effects of Feeding Phenothiazine to Chickens in Various Amounts

LYLE G. NICHOLSON, D.V.M., and ERNEST C. McCULLOCH, D.V.M., M.A., Ph.D.
Pullman, Washington

SINCE THE DISCOVERY of the value of phenothiazine as an anthelmintic in chickens [1] numerous inquiries have been received as to the feasibility or advisability of incorporating phenothiazine in poultry mashes.

At the present time great differences of opinion exist as to the relative safety of phenothiazine when used as an anthelmintic.

A few authors have reported evidence of toxicity in some apparently normal animals following the administration of therapeutic doses. [2, 3, 4] The majority of workers who have administered therapeutic doses to parasitized animals have noted no untoward effect and their treated animals have shown gains over their controls. [5–9] Investigators who have administered considerable amounts over a long period or who have repeatedly given very large doses have noted that in some instances their patients or experimental animals have developed some degree of anemia and have made less rapid gains than did their controls. [10, 11] The true evaluation of the ratio between the therapeutic dose and the toxic dose awaits additional data. The data must come from controlled research conducted in various parts of the country and under different environmental conditions. Different species of animals will have to be included and the drug administered in a number of different ways. Moreover, as indicated by the data presented by Errington [2] the presence of certain impurities in phenothiazine may be a factor in the apparent toxicity of moderate amounts of the drugs. Phenothiazine from various sources also should, therefore, be tested. It would be an extraordinary coincidence if the ratio between the therapeutic dose and the toxic dose would be the same for fowls and for mammals, or even for ruminants and nonruminants. Furthermore, the therapeutic dose against one species of parasite may be markedly different from the dose required to kill or remove another species in the same host.

The individual medication of birds is the only way by which a uniform dose can be assured; however, poultrymen prefer flock medication because it is easier and the birds are not disturbed by catching. Both methods, therefore, were included in this series of experiments. Records were kept to ascertain the effect upon mortality, body weight, egg production, and hemoglobin concentration of the repeated daily administration of (a) the maximum recommended single dose of phenothiazine (0.5 Gm.), (b) of twice the maximum recommended single dose (1 Gm.) and (c) of mashes containing approximately the minimum effective daily dose (2,000 Gm.) per ton.

PROCEDURE

The chickens were reared in individual metal cages and were given identical care except that the treated birds received phenothiazine * whereas the controls did not. Each bird was weighed weekly through-

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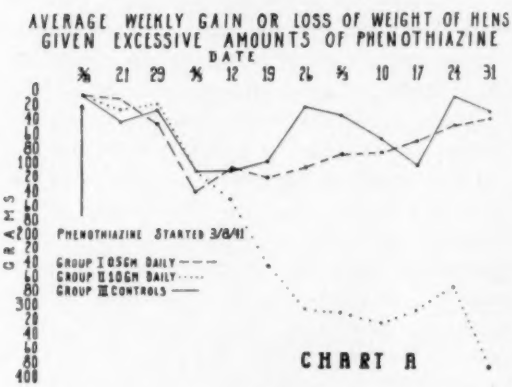
*The phenothiazine used in these trials was donated by E. I. du Pont de Nemours & Co., Wilmington, Delaware, and was labeled, "Lot 18-10402-1-769, Phenothiazine Regular. To be used only on the prescription of a veterinarian."

out the trials and the average weekly weight for each group was calculated. Daily individual egg production records were made and the per cent production determined for intervals as indicated on the respective charts.

Hemoglobin determinations were conducted on each bird weekly and the average hemoglobin values for each group were computed. A 0.02 cc. sample of blood was drawn from the brachial vein of each bird and diluted in 8 cc. of N/10 HCl to make a dilution of 1 : 400. The blood samples were drawn at approximately the same time each week to minimize irregularities in the results. Each diluted sample was allowed to stand at least two hours to insure complete



hemolysis. At the time the determinations were made each sample was agitated thoroughly to produce a uniform solution. The samples were read in a Klett top-reading colorimeter against a Newcomer glass standard hemoglobin disc. The hemoglobin values shown in the charts are not corrected by the procedure of Dukes and Schwartz.[12]

All of the chickens used in the experiments were in reasonably good condition at the start of the trials.

TRIAL I

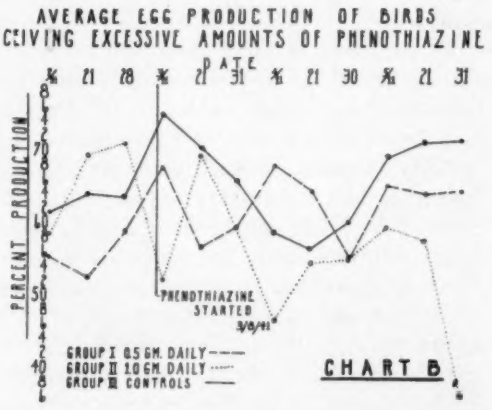
Three groups of six, single comb, White Leghorn and Rhode Island Red hens, or a total of 18 birds, were used in the first trial.

The birds were maintained for seven days under identical conditions to allow them to become acquainted with their environment. At the end of this time they were treated as follows: Each bird in group I received a gelatin capsule containing 0.5 Gm. of phenothiazine and each bird in group II received 1 Gm. of phenothiazine every day for 85 consecutive days, as indicated on charts A, B and C. The birds in group III were left as controls. Aside from the medication as indicated above, the birds were given identical care. Each bird was weighed weekly and the average weekly gain or loss in weight is shown on chart A.

Daily individual egg production records were kept. The per cent production of each group for about ten-day periods is shown in chart B.

At the time the birds were weighed, a blood sample was taken from each bird for hemoglobin determination. The weekly average hemoglobin values for each group and the weekly gain or loss in hemoglobin level is shown in chart C.

Results.—As indicated in chart A, the daily administration of 0.5 Gm. of pheno-

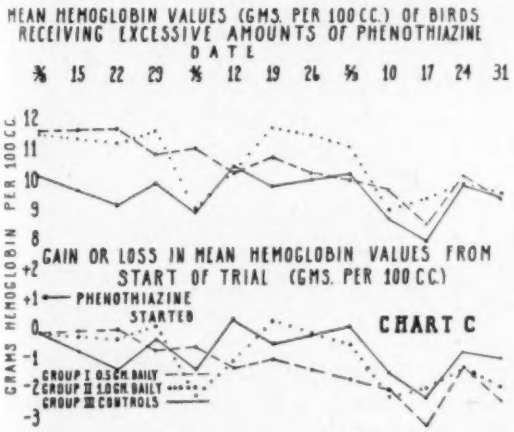


thiazine to each of the six birds in group I, for 85 consecutive days, had little deleterious effect upon their body weight. At the end of the trial their average body weight was 31 Gm. less than at the start, while the controls lost an average of 25 Gm. during the same period, or a difference in favor of the controls of only 6 Gm. The average dose per day amounted to about 0.25 Gm. per kilo, while the total dose administered during the period of 85 days was approximately 21.25 Gm. per kg. None of the birds in this group died during the trial.

The birds in group II each received 1 Gm. per day, or twice the recommended single dose, for 85 consecutive days. As indicated in chart A, the daily administra-

tion of this high level of phenothiazine did not result in a significant loss of weight during the first three weeks. During the following week, all groups declined in weight, although the birds in group II did not show a decline appreciably greater than did the controls. After the fourth week of continuous daily medication with 1 Gm. of phenothiazine, the birds in this group showed a significant loss in weight. The birds lost an average of 374 Gm. in body weight, as compared with 25 Gm. in the controls during the 85 day period. The daily dose amounted to an average of approximately 0.505 Gm. per kg., with a total of 42.8 Gm. per kg. over the 85 day period.

During this trial two birds in group II

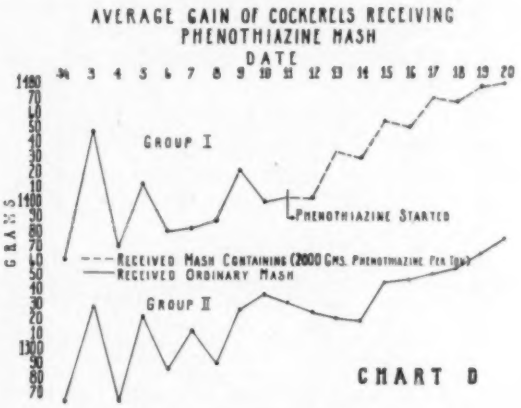


died, one on Apr. 8 as a result of a ruptured egg yolk, and the other on Apr. 20 of leucosis. Excessive overdosing with phenothiazine may have been responsible for the first death and possibly hastened the death of the bird suffering from leucosis. The hemoglobin level of one bird just prior to death was 7.41 Gm. or only 1.81 Gm. lower than the group average. The hemoglobin of the other bird the day before death was 13.64 Gm. or 1.85 Gm. higher than the group average.

The egg production of the three groups, graphed for approximately ten-day intervals, is shown in chart B. Here again, the performance of the birds in group I, which were given 0.5 Gm. of phenothiazine, was not significantly different from that of the control birds. The birds in group I were producing slightly less than the controls when the trials were started. However, after approximately a month of medication, they actually exceeded the controls in production for a two-week period.

The birds in group II, which received 1 Gm. of phenothiazine daily, showed an increase in egg production for approximately two weeks and maintained a reasonable rate of production until after the sixth week. Thereafter a significant decline did occur, which only became pronounced after the eightieth day.

At the start of this trial, the hemoglobin content of the control birds in group III



was lower than that of the birds which were to receive phenothiazine. During the course of the experiment, the hemoglobin concentration of all three pens of birds declined slightly, and the data, as shown in chart C, would indicate that long continued over-medication with phenothiazine has some depressing influence upon hemoglobin content. This, however, is not comparable with the results published by Meriweather[3] who reported a marked and immediate drop in hemoglobin content 24 to 48 hours following the administration of a single dose of phenothiazine. We have been unable to reproduce Meriweather's results. However, Meriweather did not use control birds, and in our observations we have noted marked declines and increases in hemoglobin con-

centration over comparable periods in birds receiving no medication.

TRIAL II

Simultaneously with the first experiment, a trial was conducted to ascertain the effect of continuous feeding of small amounts of phenothiazine in the mash on the health of growing birds, as indicated by mortality and body weight.

Forty-eight, 5-month old S.C. White Leghorn cockerels were selected from a group of birds reared in wire-floored cages. The birds were divided into two approximately equivalent groups and were housed in individual metal, wire-floored cages. Both groups were given identical care and feed for 11 days to allow them to become accustomed to their new environment. From the eleventh to the twentieth

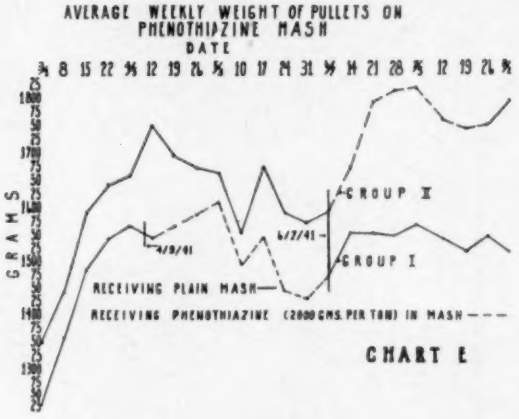


CHART E

day of the trial the birds in group I received phenothiazine in their mash at the rate of 2,000 Gm. per ton of mash. The birds in group II were fed the same mash but without phenothiazine.

The determination of the amount of phenothiazine fed was based on our previous findings and on the expected feed consumption per bird. We had found that 0.1 Gm. of phenothiazine, when fed daily to a chicken for four to seven days, was almost 100 per cent effective in killing and expelling cecal worms. Based on the estimate that a bird would consume about 50 Gm. of feed per day, we calculated that the mixture supplied would assure a dose of approximately 0.1 Gm. of phenothiazine for each bird per day. The trial was conducted for a slightly longer period than our earlier experiments in order to magnify any possible harmful effects of the drug.

The birds in both groups were weighed individually each day and the mean weight for each group determined, as is shown on chart D.

Results.—There were no deaths in either group, nor were any ill effects of the drug noted. Examination of the weight records does not seem to reveal any outstanding differences between the group receiving phenothiazine and the control group.

TRIAL III

As the results of trial II failed to reveal any harmful effect from including phenothiazine in the mash, it was thought desirable to repeat this work in order to continue it for a longer period and to make more detailed observations.

Forty-eight, 5-month old S.C. White Leghorn pullets were selected from a group of birds reared in wire-floored cages. On March 1 the birds were divided into two equivalent groups according to body weight and condition. Both groups were given identical care and feed for

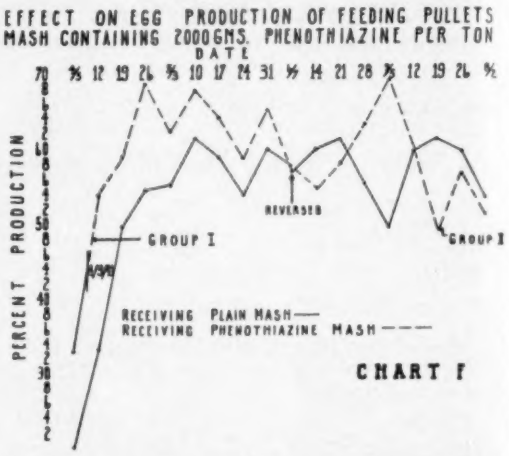


CHART F

forty days, or until Apr. 9, to enable them to become accustomed to their new environment. At the end of this period the birds in group I received phenothiazine in their mash at the rate of 2,000 Gm. per ton (the same as in trial II). The birds in group II received the same mash, but without phenothiazine and therefore served as controls. This procedure of feeding was continued for a two-month period, until June 7, and then the feeding technique was reversed, group II then receiving the medicated mash and group I receiving the plain mash for eight weeks, until Aug. 2, when the trial was concluded.

The weight records of this trial are shown in chart E and egg production of each group for seven day periods is shown in chart F. At the time birds were weighed, a sample was taken from each bird for hemoglobin determinations. The mean hemoglobin values by groups are shown in chart G.

Results.—Records of the weights of the treated and untreated groups of birds fail to show any detrimental influence on body weight traceable to the level of pheno-

thiazine fed. It is true that the birds in group II, which received plain mash during the first part of the trial, at all times showed a higher body weight than group I; however, when the feeding procedure was reversed and group II received phenothiazine in the mash, the gains showed even greater increases over those made by group I, which then was receiving plain mash.

The egg production of these two groups of pullets, chart F, does not appear to have been influenced by the inclusion of phenothiazine in the mash. The birds receiving phenothiazine showed a slightly higher production. However, they were in better production at the start of the trial. At no time during the trial did the egg production of the two groups differ much more than weekly variations of the individual groups. The reversal of the feeding procedure on June 7, produced no significant result.

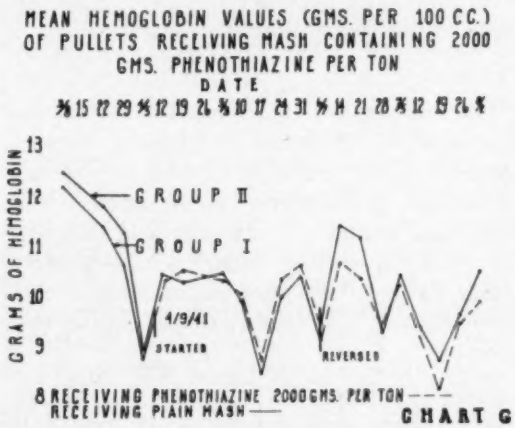


CHART G

Chart G shows the mean hemoglobin values of the two groups, which remained practically parallel to each other throughout the trial and differed from each other much less than week to week variations. If the two groups are given the same value at the start of feeding with phenothiazine, these figures seem to indicate that the group receiving phenothiazine has a very slightly higher hemoglobin level than the untreated group.

SUMMARY

The prolonged medication of hens over a period of 85 consecutive days, with 1 Gm. per day of phenothiazine, which is twice the maximum recommended single therapeutic dose, exerted a deleterious effect upon body weight, egg production and hemoglobin concentration, and perhaps mortality of the hens. Four of the six hens receiving this amount of phenothiazine, which averaged approximately 0.505 Gm. per kg. for 85 days or a total of 42.8 Gm. per kg., survived.

When six hens were given 0.5 Gm. per day, which is the maximum recommended single therapeutic dose, for 85 consecutive days no significant effect was observed upon body weight, egg production or hemoglobin concentration. All six birds survived this treatment.

The feeding of mash containing 2,000 Gm. of phenothiazine per ton for 61 days had no deleterious effect upon body weight, egg production or hemoglobin concentration.

The assistance of student help, supplied through the agency of the National Youth Administration, made the completion of much of this work possible.

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Some of the Newer Facts About Vitamins*

Young dogs receiving a ration low in nicotinic acid, pantothenic acid and the unidentified fraction of the vitamin B complex become inactive, act like old dogs, and their hair gradually turns gray.

The oral (human) dose of vitamin A ranges from 1,500 to 3,000 U.S.P. units a day for adults and twice or more that amount for children. There is, however, a wide range of safety since upward of 70,000 units have been given without harm.

Although vitamin A is instrumental in maintaining the normal physiology of epithelium (cutaneous and mucosal) it is also important to the normal physiology of the eye. Often ocular phenomena are the only outward expressions of avitaminosis A and their response of the administration of vitamin A is spectacular.

The exact amount of niacin or niacin amide to prevent blacktongue is not known, but judging from the amount needed to ward off pellagra (human) about 20 to 30 mg. per day is a hint as to the dosage for dogs. For curative purposes much larger doses are required. From 500 to 1,500 mg. daily are used by practitioners of the blacktongue zone, for blacktongue cases.

Niacin amide (nicotinic acid amide) is the form in which niacin (nicotinic acid) occurs in the tissues. It occurs mainly in bound form. Free niacin or its amide have been found only in the liver (Rosenberg). It occurs in all living cells, hence its importance in therapeutics when vitamin B is lacking. Its biogenesis is linked with amino-acid metabolism, and through coenzymes (containing it), it is obviously concerned in all carbohydrate utilization.

Biotin (= vitamin H) is a crystaline substance with a determined empirical formula, that is found in egg yolk, meat and molasses. It is necessary to the growth of yeast and many microbes (*Vitamins in the News.*)

Despite the many dramatic uses of vitamin K in human medicine, especially by the obstetrician, the literature contains no observations on its use in animals from which the veterinarian could get a cue as to its use. The hemorrhagic phenomena of sweet clover toxicosis, purpura hemorrhagic of the horse, and postpartum bleeding are but suggestions as to possible indications.

Because of the interrupted conversion of carotene (biogenesis) in disease, the demand for vitamin A is greater in sick animals than in healthy ones, so much so that a certain amount of vitamin A is indicated in most all serious ailments of an infectious nature. The presence of vitamin A is essential to the regeneration of injured cells.

The daily requirement of vitamin D is difficult to determine owing to individual variations in calcium and phosphorus utilization. The requirement for poultry has been set at 180 A.O.A.C. units* per pound of total feed for growing chicks, 360 such units for laying hens and 540 for breeding stock.—*From Vitamins, Rosenberg, 1942.*

The screwworm remedy named Smear 62, preconized by the Bureau of Entomology, USDA, is composed of benzol, Turkey-red oil, diphenylamine and lampblack. A gallon, costing $1.50, is enough to treat 200 or more wounds. Circular E-540, giving directions for its preparation is published by Government Printing Office where it may be obtained.

*Gathered, here and there, from current literature.

*Association of Official Agricultural Chemists, An Amount Equal (for chicks) to One U.S.P., Vitamin D Unit.

Transmission of Swamp Fever by the Stablefly

Studies were made to determine the infectivity of the virus of infectious anemia when administered to susceptible animals in minute doses, and to clarify the probable rôle of the stablefly and horsefly as possible vectors of equine infectious anemia. In a titration test made on a strain of virus originally isolated from an acute field case of infectious anemia and subsequently used for infecting the host animals used in fly transmission experiments, it was determined that 1 cc. of the filtered virulent serum when administered subcutaneously, intradermally, intravenously, or intracranially to susceptible horses induced an acute form of the disease. Also, that transmission occurred following subcutaneous injection of 1 cc. of the serum in a dilution of 1 to 1,000, or by repeated puncturing of the skin of a susceptible horse with a 20-gauge, 1½ in. hypodermic needle, previously contaminated by inserting it under the skin of an infected horse. Three positive cases of fly transmission by interrupted hand feeding were accomplished. Two susceptible horses developed infectious anemia 10 to 11 days after being bitten by the horsefly, *Tabanus sulcifrons*, and 1 susceptible horse 24 days after being bitten by the stablefly, *Stomoxys calcitrans*. By horse inoculation test, conclusive evidence was also obtained that the mouth parts of horseflies, subsequent to feeding on an infected horse, contained virulent virus.—[*Stein, Lotze, and Mott, Pathological (Stein and Mott) and Zoological (Lotze) Divisions of the Bureau of Animal Industry, USDA, Beltsville, Md., American Journal of Veterinary Research, Apr. 1942.*]

Photophobia is one of the early symptoms of riboflavin deficiency in man. Other symptoms are cheilosis, glossitis and corneal vascularization.

X-ray burns which take on the form of an indolent ulcer, respond to topical applications of estrogenic hormone. — *From Therapeutic Notes.*

Newcastle Disease of Poultry

Newcastle disease, named for Newcastle-on-Tyne, where it was first recognized, is a fatal, virus infection resembling fowl pest in some aspects. It occurs in Japan, Philippines, Dutch East Indies, India, and Australia. It affects mainly chickens. Turkeys are quite susceptible and ducks and geese quite resistant to natural infection. The period of incubation varies from two to seven days for artificial inoculations. The mortality approaches 100 per cent. The duration varies from four days to two weeks—average, six days. The chain of symptoms are dullness, ruffled plumage, drooping wings and tail, somnolence, staggering, torticollis, cyanosis of wattles and comb, partly opened mouth, slightly distressed breathing, drooling, and diarrhea (sometimes bloody).

This is one of the many exotic diseases which can be transported to the United States through war conditions.

Some History of Swine Erysipelas Vaccination

In 1882-1883, Pasteur and Thuillier, successfully immunized hogs against erysipelas, although the *Bacillus erysipelatis sius* (= *Erysipelothrix rhusiopathiae*) was not isolated until 1885. Loeffler of Germany is generally credited with having obtained pure cultures of the microbe on that date. The Pasteur-Thuillier vaccine was infective material attenuated by aging or by passage through rabbits. It conferred a solid immunity but had the disadvantage of arousing virulence in infected herds, killing as many as 10 per cent (Moussu).

In 1892, Lorenz conferred immunity with attenuated pure cultures and later (1897) produced immunity of short duration with serum of hyperimmunized rabbits.

In 1898, Leclainche perfected the Lorenz method by using the serum of hyperimmunized horses which was soon found to be not only preventive (for a short time)

but also highly curative. The immunity was short but it checked the course of the disease by holding the infection *in status quo* as the anti-swine-erysipelas serum of the present time is known to do with precision.

Credit for developing simultaneous vaccination (= sero-vaccination) goes to both Leclainche and Lorenz, who in the 1890's produced solid immunity against the disease by injecting serum and culture at the same time, and later fortifying the immunity with a dose of culture alone. As the serum attenuated the culture *in vivo*, the passive immunity it produced was followed with active immunity—the pattern for hog-cholera vaccination which was to be developed seven or eight years later in this country.

All of the early literature emphasizes the danger of causing a high mortality by carelessly resorting to the vaccination of herds where the disease is latent or subacute. Says Moussu in his excellent little manual *Maladies des Porcs* (1924), "Intervention against erysipelas is pure and simple, free of annoyance, consisting of a serum-culture injection followed later with a nonattenuated culture . . . but where the disease exists one proceeds otherwise to avoid accidents. The culture is pushed slowly: first a dose of preventive and curative serum, later sero-vaccination, and finally the nonattenuated culture." The history of swine erysipelas vaccination in this country is in the making.

Vitamin C (Ascorbic Acid) Cures Canine Chorea

F. D. Egan (*M. S. C. Veterinarian*, Summer, 1942) reports: "Little did I realize that some day I would stumble on something that would cure this dread disease" (chorea).

After obtaining notable results from the use of orange juice three times a day over indefinite periods of time, in treating chorea, the author began the use of ascorbic acid. In addition to orange juice, 50-mg. doses of ascorbic acid were given three times a day. Regardless of the uncertainty as to the proper dose, several cures resulted. Doses of 1 cc., later increased to 5 cc., daily were given hypodermically. Even when given intraperitoneally, the drug was well tolerated, although one pup, an Irish Setter, suffered from symptoms of anaphylactic shock.

One pup recovered after receiving 3 daily injections of 2 cc. and 2 oz. doses of orange juice given at home each day. Six cases treated since March 1, 1942, all recovered completely from this general line of treatment continued from 1 month to 73 days.

Swine Erysipelas in Horses

At the Midwest Conference, H. A. Alcorn, practitioner of Adair, Iowa, reported an outbreak of swine erysipelas in horses. The infection was contracted from exposing the horses to the débris of autopsies held on hogs. The symptoms resembled those of purpura hemorrhagica (edema of the eyes and legs and cutaneous crevices at flexion surfaces). Of the three horses affected, one died and two recovered. Other reporters spoke of the frequent occurrences of erysipeloid (human) contracted from the handling of swine but no other cases in horses were reported. The diagnosis of the Alcorn cases was confirmed by bacteriological examination of the fatal case.

I have encountered swine erysipelas for 15 to 20 years, mistaking it for hog cholera. —*G. A. Hawthorne, Clarinda, Iowa at the Midwest Conference.*

During the 1938 outbreak of equine encephalomyelitis, 23,686 horses and 47 human beings were affected. Thirty-six of the human cases occurred during August and September. The serum of 21 patients was tested for neutralization of the western virus. Of these, three neutralized the virus of equine encephalomyelitis and two that of St. Louis virus. The outbreak was predominately rural.—*Abstract from J.A. M.A., May 16, 1942, p. 295.*

EDITORIAL

Animal Sanitation and Disease Control*

(A Book Reiew)

A LONG PROFESSIONAL life in the field of veterinary education at the very geographic center of the country where the farm-animal in its various estates is the main artifact, qualifies the author to remind the world about the part the veterinary service has played in developing the vast livestock industry of the United States which is now being drawn upon to fortify the nation at a critical period of its history. Few are as competent to speak with authority on animal sanitation and disease control and their influence as the author of this work. And, fewer have ever pointed out with as much sympathetic understanding the erroneous impressions so generally entertained about the veterinarian and the veterinary service in the modern world. Though not said precisely in these words, what Kansas would be—what America would be—but for the veterinary service, runs like a shuttle between the lines in the short preface of this new piece of veterinary literature. The book is written "for all those interested in conserving livestock health," meaning everyone of every rank. The author hopes "that young people with open minds will study this book," obviously, aware how hopeless the old folks are in this respect. They (the young people) may well take the hint seriously before hunger, poverty and ill health overtakes them through having neglected the guardian of their food supply

—the veterinary service. There is a lot of food to produce, a lot of poverty to prevent, and a lot of good health to be preserved. The author's plan to accomplish all this is "to lay down a genuine foundation for the prevention of animal ailments." But, as is mentioned (inferentially), the method is not that simple because, in the case of disease that utopia cannot be attained "by those lacking formal professional education." After metabolizing that much wisdom from the short preface, the connoisseur of animal diseases and their consequences will have acquired considerable faith in the material of the 11 parts and the 51 chapters the volume contains.

In view of the originality of the effort and the latitude of the ground to be covered, the difficulty of presenting the text under appropriate titles is self-evident. Only the 11 parts can be given in this brief review: They at least give an insight into the author's plan of impressing the mind with the importance of the subject:

Part I.—"Some Animal-Health Factors," in which the drain of ill health among live stock is pointed out, all the way from the trivial dysfunction to the serious contagion.

Part II.—"Some Animal-Disease Factors," wherein both cause and effect and details of prevention are discussed. Overwork, bits and harness, grooming, clipping, crowding, forced lactation, breeding faults, deficient feeding, parasites, insects, ticks, horeshoeing, community sales, shipping injuries, etc., indicate the broad scope signalized by these titles. These two parts, in 12 chapters, show the difficulty of drawing a sharp line between actual health and actual disease.

Part III.—"Some Methods of Disease Control" covers such fundamentals as quarantine, disinfection and isolation, the age-old principles underlying successful livestock sanitation; pasture rotation and sanitation, destroying and disposal of ailing animals.

*This book was written by R. R. Dykstra Dean of the Division of Veterinary Medicine, Kansas State College. *Vide* "Book Notice" page 229.

Part IV.—"Infections and their Handling" covers too much ground to be reviewed here. Noticeable, however, are the stress placed on historical data and the selection and proper use of chemical and nonchemical disinfectants. We compliment the author for properly spelling "viricide" which generally gets into print with a "u."

Part V.—"External and Internal Parasites and their Control" covers the chemical and mechanical means used in the disinfection of pastures, buildings, dippings, etc.

Part VI.—"Noninfectious, Sporadic Ailments" includes the "not catching" troubles of live stock, the popular superstitions (hollow horn, wolf-in-the-tail, proud flesh, loss of the cud, and the influence of zodiacal signs).

If, in 1942, the need of removing these from the vocabulary of animal industry seem apropos, it is evident that the proposed drug-store-farm-hand system of animal medicine is indeed a threat to public welfare. As long as stockmen keep finding wolf-in-the-tail instead of iron-in-the-stomach, the need of books on animal hygiene can hardly be questioned.

The chapters of this Part cover a large variety of subjects of exceptional importance in animal production: hair balls, esophageal obstruction (choke), navel ailments, swallowing metallic objects by ruminants, facial paralysis in horses, bumble foot of fowls, feather plucking and cannibalism, pig eating in sows, snake bites, ringing bulls and hogs, docking and castrating lambs, dehorning, dubbing in chickens, plant poisonings, *et al.*

Sequels are pointed out, but properly, without insisting that the veterinarian only should meddle with them. That there is a certain legitimate range for home veterinary work is clearly implied by the author in these chapters.

Parts VII, VIII and IX.—"The Communicable Ailments" can be pronounced a masterpiece on the sensible handling of the most common threats to animal production. No ordinary disease of this class affecting farm animals is omitted and the advice, were it obeyed, would add many millions to the assets of the American people. Veterinarians will enjoy an approach to this significant subject that does not sacrifice the dignity of the veterinary profession nor cheapen its personnel. These are 135 pages of refreshing reading material.

Part X.—"Miscellaneous Information" describes the special methods of diagnosis (allergic, serological, chemical), feeding orphans with cow's milk, "condition powders," how to administer medicine (horses, cattle, sheep, dogs, cats, fowls), sterility, artificial insemination, soundness.

Part XI.—"Livestock Sanitary Bureaus, Board, and Commissions, and Veterinarians" contains excellent reference material of the general veterinary set-up of the United States—the veterinary service as at present constituted.

Dykstra has given to all those interested in livestock health a useful book, a book every veterinarian in every branch should read and study and encourage its distribution among clients and associates engaged in the development of America's greatest industry — farm-animal production, for, when the general public understands what the author attempts to say in a few printed pages, the veterinary service will have been placed upon a better foundation for advancement and to the country's advantage.

Improving Public Relations

Press clippings from coast to coast show that interest in diseases of farm animals has been aroused on a nation-wide scale through the work of the state veterinary preparedness committees. The achievement is outstanding. The public has been brought face to face with the veterinary problem for the first time in American history and for the first time has seen the importance of vigilance against livestock diseases. As a prominent newspaper puts it "Every pig or cow or chicken that we can save helps us on the road to victory." In a rural newspaper we read that "graduate practitioners throughout the state (Wisconsin) serve as the first line of defense," while another tells its readers that "outbreaks of hog cholera, encephalomyelitis, swine erysipelas, and other deadly livestock diseases would be a serious matter at this time." Similar quotations in endless file could be drawn upon to show that a million-dollar advertising budget could not have accomplished as much for the farmer and his veterinarian and for the public in general in a whole generation as this awakening to the fact that livestock diseases constitute a basic social problem of the American Republic.

The Gallery of Our Presidents

Since several years ago—1937—the Executive Board recommended that the life of each AVMA president be commemorated with at least a portrait (photograph) in the central office, the laudable project has lagged from lack of effort, although no time was set for completing the gallery. Hopeful that constituent associations would be impressed to the extent of furnishing portraits of presidents elected from their state, the staff of the central office was charged with making the solicitations. The twenty-five portraits now in the gallery were obtained through the living presidents themselves in compliance with personal requests. Note that: *New York* owes the gallery portraits of Copeman, Curtis, Large, McLean, Bell, Law, and Moore; *Massachusetts* of Stickney, Wood, Thayer, Lyman, Osgood, Winchester, and Jakeman; *New Jersey* of Miller, and Lowe; *Pennsylvania* of Huidekoper, Pearson, Marshall, Adams, and Munce; *District of Columbia* of Salmon, Melvin, Hall and Wight; *Indiana* of Williams, Butler, and Sigler; *Missouri* of Stewart, Kinsley, and Flynn; *Minnesota* of Cotton and Fitch; *California* of Archibald; *Canada* of Rutherford and Torrance; *Ohio* of White, Hilty and Brumley; *Michigan* of Brenton; *Illinois* of Welch; *Wisconsin* of Ferguson; *Kansas* of Dykstra.

A glance through these names shows that out of the 64 presidents, 42 are missing from the gallery the Executive Board proposed as a means of keeping veterinary history fresh in the minds of the successive generations. Any one who will trouble to furnish portraits that can be made into suitable reproductions will be giving a helping hand toward the completion of this laudable effort.

This subject is revived now because of the contribution of a photograph of Alexander F. Liautard, the first secretary and the seventh president, by Wilford A. Haynes (Gr.R. '02), longtime member of the Association, and retired practitioner of Jackson, Michigan. The portrait goes into the gallery, in preference to other portraits of Dr. Liautard because it portrays that distinguished president during the earlier years of his professional life. A hurriedly written biography of our seventh president is as follows:

Alexander F. Liautard (Toulouse '56) deserves the distinction of being named the father of the American Veterinary Medical Association, not only because he was instrumental in its founding in New York City in June, 1863, but also for the constant interest he took in its development during his 40 year's sojourn in the United States. He arrived from France in 1860 after three years of military service and departed never to return in 1900, dying in his home near Paris at the age of 83. His professional life is honored here for what he did, and that should not be forgotten since the country (France) of which he chose to remain a citizen may be less fortunate in coming decades than the one (United States) in which he labored as practitioner, educator, author, organizer, and inspiring figure in veterinary development. How much the United States owes to Alexander

Alexander F. Liautard (1835-1918), the first secretary and seventh president of the American Veterinary Medical Association, as known during the active years of his professional life.

Compromising with Quackery Not Patriotic

Thanks to good weather, good farmers, soil fertility, and the disease-control system maintained among farm animals, there will be plenty of food to set a good table and keep the pantry full, through 1943, current reports indicate. A big harvest of small grains is in the bag and the corn crop has but to escape hot winds and an early frost to feed the largest crop of hogs in all history—105,000,000, or 25,000,000 more than the former top. The sugar-beet crop promises to knock the rationing of saccharides for a goal. As told by the *Chicago Daily News* (July 16), "Mother Nature is being kind to the United States . . . These are crops that put bread, beef, and cheese on the table." To this we would add eggs, chicken, duck, turkey, and goose, and plenty of horses and mules to carry on when the gas gives out.

In brief, blinded by what seems to be a fine brand of fifth column propaganda, abundance is pointed out as a gift of the weather that Hitler, Hirohito and Il Duce can never break down, when as a matter of fact some people are breaking it down by proposing to scrap the veterinary servive and turn over the health of farm animals (the main source) to the farm hands on the pretense of saving some dollars for the farmers, and in the guise of magnanimous philanthropy. There is no doubt that the Middlewest, with its food-producing capacity, will be a hard line of defense to break through but only to the extent that diseases of farm animals are prevented in the orthodox way. Regrettably, this simple fact is as recondite in popular understanding as it is easy picking for the would-be agricultural philanthropists.

The widely quoted apothegm that "food will win the war and write the peace" may be self-evident, but what is always overlooked in the food-for-freedom progam is that the urge to produce more and more food would be as impotent as a flat tire but for the scientific system of animal disease control which the self-appointed protectors of the American farmer are trying to break down. If food is to win the war then why meddle with the service that has made that prospect possible? Why sacrifice any of it to the ways of the charlatan?

Assuming that the food supply is going to be an important factor in the winning of the war and that winning is of considerable moment, it is the patriotic duty of the American veterinarian to fight any sabotage that shows its ugly head among the animals of the farm, whatever may be its disguise. Remember that mankind in trouble is a strange creature, perhaps, dumb enough to be taken for a ride—in the gangster's car. The duty of the American veterinarian in this war is mapped out. He must fight diseases of the gregarious animals that furnish the food held out as necessary to win the war, and he must likewise fight any attempt to molest the system that has made the abundance a reality. There can be no compromise with quackery now—or ever.

A book by Louis Adamic entitled "Two-Way Passage" reminds the reader that Americans and their children, having grown their roots in free soil, are now going back to Europe to teach the lesson of a better life—a life, not perfect, but better than that of their ancestors. Yes, America is worth fighting for. It's the first modern example of large scale freedom. So, let's fight it out "if it takes all summer" or coming summers. But meanwhile, let's hope that greedy nationalists will not again squelch American philosophy at the next peace conference.

In five states (Missouri, Illinois, Iowa, Ohio and Indiana), 3,700 families have had to move from their farms to make way for army camps and industries. The migration has destroyed a number of veterinary practices.

(Continued from preceding page)

Liautard's 40 years among us will never be told except in the annals of the AVMA where the evidence of his efforts can never be erased, except with the Association itself.

The National Live Stock and Meat Board's Annual Report

(A book notice)*

AS THE WHITE MAN is fighting with his back to the wall, this book is more than a mere advertisement of an American industry. It is a declaration of confidence in the food supply of the American people and their fighting allies, plus a reminder that the National Live Stock and Meat Board, speaking in behalf of America's greatest industry, obeys the Government's command to produce more. Thus far, the harvest has been the most gigantic assemblage of live stock ever produced anywhere at any time in the world's history. As of Jan. 1, 1942, the census shows 191 million head on approximately six million farms—an outstanding paradox while the knell of hunger is tolling the fate of countless millions in many parts of the world.

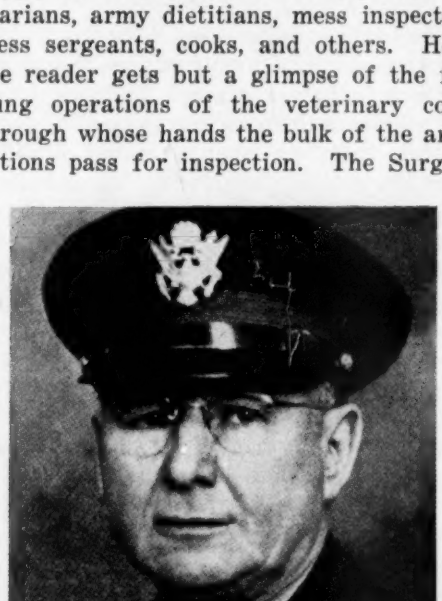
The book is a hundred pages of morale-building material which makes *meat* an understandable word and *farm* a venerated sanctuary. The fact that both of these have been handled pretty much as handy political footballs, is of course not mentioned. In the veterinary vocabulary, live stock, meat, milk, farm, ranch need no eulogistic definition, since there is no step in the food-production line that escapes the guiding hand of the veterinarian. Health of farm animals—the source of abundance—which nothing but veterinary science can provide has always been politely dodged when telling the American people what's what in the food supply they celebrate with never-ending orgy. To that we are inured. But, in reviewing books on "things to eat," we have to be pardoned for pointing out omissions which seem to leave the whole structure of food production as perishable as the proverbial snowball, and we might be excused for emphasizing that the people's provisions would not be abundant but for the continuous operation of veterinary medicine on the farms and markets. This is not told with peevish emotion but as a duty. To get sentimental, let's say patriotic duty, for the American people can go headlong to defeat, playing fast and loose with their veterinary service. In fact, trusting that our abundance is an indestructible gift of God, lacks the reasoning of the wise, since in any analysis the sages of national economics may make, the trained veterinarians will come out as the benefactor and the people as their beneficiary. So, in a way of speaking, it is patriotic to blow our own horn. Having helped to expand the American girth, we might be cited for neglect of duty by remaining silent. While American veterinarians are not expecting anyone to pull their chestnuts out of the coals, they do believe the moment is opportune for someone in the business of food production to acknowledge the danger of meddling with its own and only hope—the health of live stock on the farms and ranches.

This book is General Manager R. C. Pollock's report to the Board for the fiscal year of 1941-1942, announced as twelve critical months of American history. Faithful to his task, the author produces a masterpiece on the subject which maps out the Board's wartime program in graphic fashion. In the "Civilian Food for Victory Program" the personnel listed includes: home economists, nutritionists, public health workers, social workers, physicians, dentists, dietitians, nurses, teachers, college students, county agents, caterers (in that order with minor omissions). There is no hint here, of America's guardians of animal health—the veterinarians—working among the growers of live stock. Obviously, the practical absence of grave, domestic and exotic hazards in this country is thought to be out of place in a food-for-victory program. Yet, no group is better organized (and at work) for civilian defense or more aware of the nation's peril in this respect than the veterinary profession of this hour. The peril is not generally enough known to exist.

In the "Program for the U. S. Armed Forces" the workers listed comprise com-

*Nineteenth Annual Report of the General Manager, National Live Stock and Meat Board, for the Fiscal Year 1941-1942. 100 pages, profusely illustrated. Copies may be secured by addressing the Board, 407 S. Dearborn Street, Chicago.

manding officers, school commandants, public relations officers, post quartermasters, supply officers, medical officers, post veterinarians, army dietitians, mess inspectors, mess sergeants, cooks, and others. Here, the reader gets but a glimpse of the far-flung operations of the veterinary corps through whose hands the bulk of the army rations pass for inspection. The Surgeon



Lt. Col. Jesse H. White (C. V. C. '05).

General, with his groups of physicians and veterinarians guarding the soldiers' rations, may be disappointed that the author did not seize the opportunity to tell the mothers of millions that the mess sergeants and cooks have a lot of help all the way from the packing house to the rolling kitchens in far-away places.

It is not generally known in the veterinary profession that the Quartermaster General has a veterinarian serving as chief of the Meat and Dairy Division of the Subsistence Research Laboratory in Chicago. This is Lt. Col. J. H. White, M.D.C., whose portrait, reproduced herewith, is contained in the report. The position is one held by Doctor White for many years. The title indicates the character of the duties performed for the "department of food procurement." The classes of veterinary officers on food inspection by the veterinary corps are not mentioned.

Owing to the part veterinarians do and must play in the food program, the book is commended for wide distribution and careful study by members of the veterinary profession, all of whom realize that while signalizing disease control among livestock and boosting the consumption of meat are industrially incompatible and theses on different themes, the fact remains that the true story of abundance told by the food industry itself has been too long neglected.

Veterinary Enrollment for Service: A Fine Record

A letter dated July 31, 1942, from the National Roster of Scientific and Specialized Personnel of the National Resources Planning Board says, in part:

> Our last figures show that we have received a total of 12,400 completed questionnaires from veterinarians, thus leaving about 600 who have not as yet returned their forms.

This is a good showing for veterinarians and the veterinary profession in coöperating with the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, now a part of the War Manpower Commission under the chairmanship of Paul V. McNutt. Last April, when this important survey was undertaken to help meet the nation's military and civilian needs for professional personnel, those charged with the veterinary enrollment realized that in order to be successful and obtain the desired results, a response of at least 90 per cent was necessary. The present figure is slightly over 95 per cent.

The AVMA office, late in July, furnished the National Roster with a complete transcript of its member and nonmember address lists so that the returned questionnaires could be checked off and a special mailing made to the few remaining veterinarians who had not returned the enrollment form and questionnaire. Before the books of this voluntary registration for service to our country are closed, we predict that the veterinary profession will have responded almost to a man.

The data on the education, training, experience and special qualifications of veterinarians which have been accummulated by the National Roster will prove of great value to meet prospective needs for trained men, and for reference and statistical purposes. An exhibit at the recent AVMA convention showed the manner in which the questionnaires are processed and how special lists of individuals can be drawn off by the punch-card system.

Farm-Animal Diseases Are Just That Mean

"Only 60 per cent of all pigs survive until marketing time to become part of the nation's food supply."—Science News Letter, July 18, page 34.

Finally, but mayhap too late, the destructive effect of farm-animal diseases is arousing popular attention. That the mortality among farm animals determines the quantity of available human food to a considerable extent is beginning to make the headlines. To the scheme of food destruction, the connoisseur of the biological sciences germane to food production would add loss in poundage due to disease and subclinical states of ill health. These only the veterinarian is in a position to weigh.

The threat of disease to food supply in the form of pig mortality is set arbitrarily at 40 per cent of all pigs born. This figure is being broadcast as a warning quite a few decades after it was known in the veterinary circle and repeatedly emphasized (unheeded) as a matter of considerable national importance. This high mortality has been particularly noticeable since the farm bureaus of the Middlewest installed their system of disease control among the porcine population.

If mortality among swine is taken as the criterion, the systematic, large-scale invasion of the field of scientific veterinary medicine by the farm bureaus is leading the United States nearer and nearer toward ruin. That its departure from the conventional practices of this period is a national menace of the worst type is incontrovertible. Were bovine, ovine, and equine medicine to pass out of sensible direction to the same extent as porcine medicine has in the Middlewest, weeping over the hungry millions of a defeated America would soon replace the gloating over the abundance the American people enjoy. *"Diseases of Farm Animals are Just That Mean."*

So, as often repeated in these columns, the fight for common sense in the handling of farm-animal diseases is a fight for American freedom and nothing less. On the other hand, promoting, backing, advocating quackery is the most deadly fifth column sabotage the mind can conceive. The American veterinarian is for the U. S. A. and he has no liking for anybody or anything which, through design or ignorance, would sabotage the people's food. He is taught to understand that the food industry is his field of work and that any agency that will threaten the supply of the raw material—animals—is something to fight with all of his might.

Our sons and your sons are fighting a horrifying enemy, perhaps in far-away places, to protect your home and your possessions and your way of life. So, we implore, don't let a canny fifth column in the guise of friend lead you headlong into the enemy's camp. By simply letting the quackery proposed for your animals get momentum, you can make powerful America as helpless as a hutch of rabbits. Food in war is that important.

The Japanese narcotize with opiates the population they aim to strike down. But their plan has a much lower potentiality than diminishing food supply through quackery. Remember that the saboteurs work in strange ways and in strange places. The veterinary service of the United States has been successful. It has helped in a large way to make the nation powerful. What can be the reason for making changes now except personal greed or planned injury to the war effort?

Veterinary service is never noticed much until mankind gets itself into a jam.

The Meat We Eat

(*A book notice*)

This book is the report of the New York State Trichinosis Commission to Governor Lehman and the State Legislature, identified further as "Legislative Document, No. 35." The letter of transmission is signed by State Senator Thomas E. Desmond, chairman, and eight members among which are two physicians obviously chosen for their knowledge of public health. The report announces the appointment of an advisory council on meat inspection of five members, four of whom are prominent veterinarians: Hagan, Fauler, Merry, Parker. Recommendations are made on sanitary slaughtering, processing pork to prevent trichinosis, prohibiting pork in hambergers, feeding uncooked garbage to hogs and state-wide meat inspection. The Commission acknowledges the aid of Willard H. Wright, chief of the zoölogical division of the National Health Institute, who reviews the trichinosis situation of this and foreign countries; of the New York State Veterinary Medical Association, New York State Board of Health, New York State Department of Agriculture and Markets, and the American Meat Institute. The part these played in the documentation of the report is not clear.

In effect, the report is a strong plea for state-wide meat inspection designed to overcome the unbelievable state of affairs depicted by series of pictures of filthy, insanitary slaugherhouses, methods, and practices, which were taken in making a survey of the situation. Verified reports of the selling of meat derived by slaughtering sick animals is but one of the nauseating facts disclosed.

But why blame all this on trichinosis as this report clearly attempts to do? Here, the book is willful exaggeration without competition as such. Folks of the Cornbelt may well regard this a shocking blitzkrieg at the heart of America magnified to draw attention to states of filth and dishonesty which can be abolished, not by medical science, but by cleaner politics and cleaner abattoirs. This book of 147 pages of serviceable material, opens up with 15 pages of deliberate misrepresentation about trichinosis, entitled "The Story of Trichinosis." As if to dignify this part, there are seven pictures of great scientists who in the last century wrote on this parsitism. Then one turns to a "cross-the-page" picture of six men, captioned "Pork Parasites Strike 1 out of 6 Americans". One of the six is struck flat to the ground with an arrow personifying *trichina spiralis*. Were this true or nearly true the swine breeders of the United States ought to be herded up and put in a concentration camp. It was Moses (*Leviticus* 11 : 8) who started all this, the reader is reminded. In the 10 or more pictures of dirty abattoirs taken in different parts of the State, one spies the fouled carcasses of cattle and sheep but no hogs, and in eight case reports of butchers selling the meat of sick animals (sold "to save the cost of burying"), there were cattle affected with metritis, mastitis, pneumonia, "slinks", etc., and one load of cholera-affected hogs, which a local butcher bought and sold for human consumption. It would be hard to see where the control of trichinosis would alter this ugly picture.

If *"The Meat We Eat"* is a revelation to the general public, it certainly contains nothing novel to the veterinarians of the United States who know that New York is not the only state where public health is jeopardized by the lack of intrastate control of meat. Anyhow, the chapter on trichinosis is in no respect a sane approach to that minor public health problem. It has too much the smack of political ambition, useful as it might prove to be in cultivating a needed reform in the production of meat. [*The Meat We Eat by the New York Trichinosis Commission, State Senator Thomas E. Desmond, Chairman. 147 pages, profusely illustrated. Paper. 1942.*]

Over-Charging, A Hackneyed Indictment

Men of our own circle, in the upper cadre, have agreed with the advocates of quackery for farm animals on the premise that practitioners have brought trouble to themselves by charging too much, whereupon one gets curious to know when, where and how the crime was committed. We know of no veterinarian who ever got rich from practice nor of any national, state or local association that ever inscribed that thought into its minutes. If it's a case of charging a whole profession with the sins of the few, the few should be named. Basically, the charge is not valid since no one can stay long in business without giving value received in goods or service. The charge of over-charging is hackneyed, old, worn out. Digging up a new one in defense of farmhand medicine is overdue.

Importation of Purebred Live Stock Increased

Besides offering a haven for human refugees, the United States is developing as a reservoir for purebred live stock, says a report of the USDA. During the year ending June 30, 1942, a total of 20,247 such animals arrived, a gain of 27 per cent over the previous fiscal year. Holstein-Friesian, Jersey, and Ayrshire cattle predominated. They came from Canada, Mexico, England, Ireland, New Zealand and several South American countries. The object is to build up reserves needed to reëstablish herds in countries pillaged by the enemy.

The number of farm animals in the countries occupied by the Germans has been reduced from 25 to 50 per cent, according to reliable sources of information.

The Quantity of Food

The quantity of food a nation has is largely determined by the mortality or livability of farm animals, plus loss or gain in poundage through health or disease, including the stealthy states of subnormal health which are not recognized. The meaning of this protocol is that if food supply is going to be a factor of ever-increasing significance in the winning of the war, quackery among farm animals is truly a magnificent scheme of decay—a scheme capable and likely to bring the history of the United States to an abrupt end. Except in the veterinary circle where the intricacies of food production are studied, this type of reasoning before World War II was not understandable.

Those "Little" Minerals

New facts are continuously coming to light on the "little" or "trace" minerals. They are satellites of the main subject of mineral requirements, perhaps quite as important as the knowledge of endocrines and vitamins.

Fluorine is an essential factor of dental development and its rôle in the etiology of caries is being studied.

Cobalt, unknown in the study of nutrition until recently, plays an important part in the forming of hemoglobin in cattle, sheep and dogs and supports iron and copper in correcting anemia.

Manganese deficiency is expressed in poultry production in the form of slipped tendon (porosis) and defective mineralization of the skeleton.

Magnesium somehow props up calcium metabolism. Without it, high intakes of calcium do not improve hypocalcemic states. There is more magnesium than calcium in soft tissues, although compared with calcium, there is but little magnesium in the whole body.

Zinc is one of the ingredients of insulin but its rôle in carbohydrate metabolism is not known.

Iodine, a "must have" halogen of higher life, is the best understood element of the "little mineral" class. Its action is known only by a complete knowledge of thyroid physiology.

Albert Einstein, now 62 years old, proud of his American citizenship, is the world's most distinguished refugee from Nazi Germany—*Science*.

If God did not exist, it would be necessary for man to invent one.—*Voltaire.*

CURRENT LITERATURE

ABSTRACTS

Coccidioidomycosis in Man and Animals

The influenza-like human diseases known in California for many years under the names "valley fever," "desert fever," "desert rheumatism," or "San Joaquin Valley fever," has the same microbial origin as the coccidioidal infection affecting cattle, sheep, dogs and cats—the *Coccidioides immitis*. In man the disease is a chronic, fatal, progressive disease affecting the lungs, skin, lymph nodes, bones, meninges, and thoracic viscera that may be mistaken for tuberculosis. It is recognized by recovering the fungus from the sputum in lieu of an acid-fast bacillus. Although the infection can be transmitted experimentally to laboratory animals, there is no evidence that infection occurs from man to man, animal to animal or animal to man. Transmission appears to be by inhalation and wound infection. Its geographic distribution is the western states, Mexico and South America. The disease was recognized in cattle by Giltner (L. T.) in 1918, by Bengston in 1939 and by Schoening in 1942. Lesions similar to those of tuberculosis, actinomycosis, actinobacillosis or abscesses due to *Corynebacterium pyogenes* are described by these Bureau pathologists. Where the disease occurs in man, animals (cattle, sheep, dogs and wild rodents) appear to harbor the causative organism. [*Stiles, George W., Ph.D., M.D., and Davis, Charles L., D.V.M., U. S. Bureau of Animal Industry, Denver: Coccidioidal Granuloma (Coccidioidomycosis). Its Incidence in Man and Animals and its Diagnosis in Animals, Journal of the American Medical Association, cix (July 4, 1942), pp. 765-769.*]

Milk in the Army

About 20 per cent of the food issued is some form of milk (fluid milk, cheese, ice cream, and dry skim milk) not counting 35 to 45 Gm. of butter for every man per day. The Army knows that close inspection is maintained by the veterinary officers who inspect milk all the way from the farms, through the plants and regular laboratory of milk samples picked up from various shipments to the camp. The camp laboratory is modern, well equipped and staffed with top-notch personnel. The milk is routinely examined for fat and must have a content of 3.25 per cent and a bacterial count not over 30,000 per cc. At this station pasteurization comes under an efficient health department. Analyses have shown an average fat content well over 4 per cent and the milk is delivered fresh daily. Evaporated milk, ice cream, Cheddar cheese, and dry skim milk are consumed in large quantities. Milk and milk products play an important part in the diet of soldiers. Manufacturers, health inspectors, quartermaster, veterinary corps, and the laboratory all coöperate to provide the soldiers with sanitary products of high quality and they uphold the reputation that we have the best fed army in the world. [*Thompson, Lt. Donald L.; Sanitary Corps: Milk in the Army, Journal of Milk Technology, v(July-August, 1942) p. 246.*]

Fluorine and Dental Caries

Claims to the effect that a certain percentage of fluorides in water supplies lowers the incidence of dental caries was not confirmed by the U. S. Public Health Service through preliminary work carried out at Garretsville, Ohio. The morbidity rate in 109 school children exposed for two years to drinking water which had been increased in fluoride from about 0.1 to 0.7 p.p.m. had a similar rate of dental caries as children born and reared where the domestic water supply was practically free of fluorides. [*Arnold, Francis A., Jr. and Trendley, H. and Elvove, Elias: Domestic Water and Dental Caries, Public Health Reports, lvii (May 27, 1942), pp. 773-780.*]

Tocopherol—Vitamin E

The alcohol isolated from wheat-germ oil by Evans and coworkers in 1936 was named tocopherol for "*tokos*", offspring, and "*pheros*", to bear. Two years later (1938), three of these alcohols had been isolated from wheat germ, namely: *alpha, beta, gamma*. In biologic assays, *alpha* was found to be twice as active as *beta*, and four times as active as *gamma*. The three are isomeric. While over 40 synthetic tocopherols have been produced none of them are comparable in biologic activity to the vitamin.

Vitamin E is so widely distributed throughout the plant world that it was not thought conceivable that animal life of any type could possibly suffer from E-deficiency, and it was so argued in the earlier part of the vitamin pe-

riod. Revealing research work was difficult because it was quite impossible to produce a vitamin-E-free diet for the experimental animals, and, therefore, a tedious task to throw light on its physiological action. Its antisterility action was first demonstrated in bio-assays showing that vitamin-E-depleted female rats failed to reproduce and male rats suffered from degeneration of germinal epithelium of the testicles, while in both a state of good health was maintained. Investigation in other species was hampered by the wide distribution of vitamin E in their natural foods.

In the 1930's decade, an entirely unexpected function of vitamin E was demonstrated by the feeding of iron-treated diets to guinea pigs and rabbits. The lesions were muscular dystrophy and damaged nerve endings related thereto. Similar lesions were produced in goats and sheep fed E-depleted diets. Early embryonic mortality in chicks was produced in the same manner, and also severe myodegeneration and brain lesions in the growing birds, together with occulsion of the capillary beds of the damaged areas. Muscular dystrophy has likewise been produced in E-deficient dogs.

While the complete mechanism of vitamin E-deficiency remains to be proved there is ample evidence of its far-reaching ramifications in the vascular, muscular, and nervous organs and the embryo and fetus. In man, it seems reasonable to assume that a substance so essential to other mammalian forms must play an important part in the human economy, but owing to the wide distribution of this vitamin in plant and animal tissues and its storage and retention in the animal body, the vitamin-E-deficient state in man should be rare, unless brought about by gastrointestinal or other disturbances that interfere with its absorption, retention or utilization. [*Mason, Karl E.: "Changing Concepts of the Antisterility Vitamin (Vitamin E), the Yale Journal of Biology and Medicine, xiv (July, 1942), pp. 603-617.*]

Negri Bodies in Rabies

Negri bodies can not always be found in the brain of man or animals dying of rabies. When the microscopic examination of the brain specimen is negative, animal inoculation must be resorted to. Out of 771 specimens examined, 10.5 per cent were Negri-body negative. In an epizoötic of fox rabies, 9.4 per cent were Negri negative out of 137 specimens examined. In 92 mice, experimentally infected, 14 per cent showed no Negri bodies. The Negri negative specimens in experimentally inoculated dogs was 39.7 per cent, notwithstanding that 46 per cent of these dogs showed furious rabies at some time during the course of the disease. In the paralytic cases of this group 52 per cent were negative to the microscopic examination. These observations indicate that street virus during the course of an outbreak is altered in virulence by the site of multiplication. [*Abstract from Illinois Medical Journal in J.A.M.A. cix (Aug. 1, 1942), p. 1,138.*]

Thiamin Deficiency

In a study of thiamin deficiency in man, Williams, Mason, Smith and Mann, of the Mayo clinic found that severe restriction of vitamin B_1 caused inactivity, apathy, deranged metabolism, loss of weight, prostration, and that moderate restriction caused emotional troubles expressed by irritability, quarrelsomeness, fear, aggitation, mental depression, and various somatic symptoms. Persons receiving 0.07 mg. per each 1,000 calories of the diet over a period of 147 days lost weight and strength whereas weight was maintained when the intake was 0.22 mg. per 1,000 calories. The observation showed that between 0.22 and 0.5 mg. per 1,000 calories is the daily human requirement of thiamin. The report of this work indicates that the intake of thiamin should not be less than 0.5 mg. nor more than 1.0 mg. per 1,000 calories per day. In judging the thiamin requirement environment, activity and somatic factors should be considered. [*Williams, R. D., Mason, H. L., Smith, B. F., and Wilder, R. M.: "Induced Thiamine (Vitamin B_1) Deficiency and Thiamine Requirements in Man," Archives of Internal Medicine, lxix (May, 1942), p. 721.*]

Ultraviolet Radiation of Stored Meat

Ultraviolet radiation in meat storage, in its relation to refrigeration, was studied at the request of the Medical Department Supply and Equipment Board, U. S. Army, mainly in regard to its effects on weight and appearance of the products tested. The action of various wavelengths (ultraviolet) on microbial life, being well known, was not included in the trials. The established facts concerning the bacterial action of sunlight are taken for granted. Later work attempted to discover the wavelengths that are the most lethal to various organisms. The greater lethal action of the shorter wavelengths and their practical application is acknowledged, although the mode of action has not been proved. Whether a bacterium is killed when struck at a vital spot with a proton or is killed by absorbing radiant energy which disintegrates its protoplasm are problematic, but nevertheless these theories serve as the basis for the use of ultraviolet radiation as a microbicide. The ability of the ultraviolet ray to transform two-atom oxygen into three-atom oxygen or ozone, has long been realized. Ozone prevents microbial propagation, one-thousandth part per million being equal to one part per million in unexposed air. The benefits derived from ultraviolet radiation of stored meat varies according to the amount of original contamination (time since slaughter,

handling methods). Extensive contamination (bacteria, molds) reduces its value as a decontaminant. The danger of personal injury, especially to the eyes (conjunctiva, retina, lens), is pointed out. Latent lesions of pulmonary tuberculosis may be activated in operators possessing them. As direct radiation upon the hanging meat is necessary, the visor of the operator's cap must be drawn over the eyes because the lamps, to be effective, can not be shielded.

The cooler used to make the trials was 16'x12'x8½' in size. The products tested were frankfurters, liverwurst (fresh), pork loin, lamb saddle, beef rib, and smoked ham. The observation lasted 12 days, during which time continuous temperature and humidity readings were made. The mean temperature was 35 F. and the humidity 83 per cent, approximately.

The wavelength found to have the greatest microbicidal effect was between 2,500 and 2,600 Angestrom units (250 million of which equals 1 inch). Two charts give a lucid report of the results on the products above named. The conclusions drawn were that ultraviolet radiation diminishes bacterial action in stored meat products, retards mold development, and saves trimming, shrinkage, and probably the power used in the process of refrigeration. Working under mercury-vapor lamps is safe if the precautions recommended are taken. [*Deane, Don L., Major, Veterinary Corps, U. S. Army: "Ultraviolet Radiation in Meat Storage," the Army Veterinary Bulletin, xxxvi (July, 1942), pp. 210-219.*]

Wartime Code for the Press

The "Code of Wartime Practices for the American Press", published by the Office of Censorship, contains directions on the handling of news about troops, ship movements and cargoes, ship sinkings, air attacks (before, during and after raids), fortifications, production of material, weather, propaganda, and matters of a general nature pertaining to the war work. On the whole, the document is a plea for the exercise of common sense in writing or speaking about any of the various subjects mentioned above. There is no restriction on giving the names and addresses of troops and persons in training camps in continental United States provided there is no mention of tactical units or predictions of troop movements or embarkations. One is to remember also that until officially announced nothing may be said about troops or persons in combat zones which at the present time are practically all outside of the United States. "It is hoped," says Director Byron Price, "that the columns of the American publications will remain the freest in the world." [*Code of Wartime Practices Office of Censorship, Washington, D. C., edition of June 15, 1942.*]

Alfalfa Leaf Meal and Dried Cereal Grass in Poultry Feeding

The authors set out to determine the relative value of alfalfa leaf meal and dried cereal grass in increasing production and hatchability when used as supplements to the laying and breeding rations. The amounts fed and the results observed are given, together with the ingredients of the basal rations. The effects are registered on tables and graphs. The experiment furnishes evidence to the effect that both of these supplements contain factors deficient in ordinary rations composed of grain, grain by-products, minerals and fish oils and that the deficiency was not riboflavin which is essential to embryonic life. There was no definite increase in egg production but in the fall and winter when there is a slump in hatchability, 2 per cent alfalfa leaf meal prevented the usual slump, while cereal grass was much less effective in that respect. [*Cravens, W. W., Holmes, C. E., Halpin, J. G., and Elvehjem, C. A.: The Effect of Alfalfa Leaf Meal and Dried Cereal Grass on Egg Production and Hatchability, Poultry Science, xxi (July, 1942), pp. 301-305.*]

Immunity and Resistance

Exception is taken to the use of "immunity" and "resistance" interchangeably in reply to Dr. River's statement that "*immunity* is *resistance* to infection or injury." Each should be used to convey the idea indicated by its derivation. The word "immune" means exempt or free from a definite thing, whereas "resistance" signifies that the object spoken of offers appreciable opposition to whatever is trying to attack or overcome the body. Resistance does not convey the idea of complete exemption from any infecting agent. The two words are not commutable and should not be used, synonymously. "Immune" should be reserved for those conditions wherein there is no evidence of disease or in which the infectious agent is unable to establish itself. [*Giddings, N. J., Bureau of Plant Industry, USDA: Immunity and Resistance, Science xcv (May 29, 1942), pp. 553-554.*]

Horses in Cattle Raising

Cattlemen of the range country need from 16 to 25 riding horses for each 1,000 cattle on the open range. Each cowboy has at least five horses and those engaged in cutting or roping need at least seven. As cutting is hard on horses, they are used but two hours a day on alternate days, but fewer horses would be needed were they fed grain. Most horses of the cattle country are exceptional mounts, 15 to 15.1 high and weigh around 1,000 lb. Enough hot blood (Arab, Thoroughbred, Quar-

ter Horse) is needed to give them speed and endurance. Some of them are from old Spanish blood from Mexico, 400 years removed from the original stock. Cattle horses should be raised where they work to get the ability to handle themselves on familiar terrain. The prairie horse is less agile on rocky land. Moreover, cattle ranches use a certain number of draft horses for putting up hay. Making horses gentle from foals adds to their usefulness. Cattle ranches are eminently fitted for the raising of good mounts. [*Dinsmore, Wayne, Secretary of the Horse and Mule Association of America: Good Horses Essential to Cattle Ranches, American Cattle Producer, May, 1942.*]

Milk Is Health Insurance

Industrial milk service advocated by the National Dairy Council is an important weapon of defense and should be expanded. At one plant one hears the workers cry "Milk!" as a hand truck pushed by a man in a white coat comes around the corner, but this is not new. For years industry provided safety devices to prevent injury, now they provide means to protect health. One of the pioneers in this line furnishes 1,500 employees with half a pint of milk every day. Though everyone was at first skeptical, after six months of trial the plant—Thermoid of Trentone, N. J.—decided to continue the project indefinitely. Says President Schulter of the plant: "At a time like this when everybody is under strain and pressing hard for more production to meet defense requirements, we find this distribution of milk an important contribution." Summed up, the results have been that many who had never drunk milk, have acquired the habit and find that it makes their work easier. The plant, on the other hand, profits by increased productivity and less illness among employees. [*Hult, Milton: Milk Is Health Insurance. Certified Milk, xvii (May, 1942), pp. 11-12.*]

Hybridization of Cattle and Bisons

The hybridization of domestic cattle and buffalo (*Bison americanus*) by the Experimental Farms Service of Canada is described. The bulletin is a supplement to one published in 1935, now out of print, which included the yak as well as the bison. The object in this supplementary summary is to bring data up to date on herd increase, sex ratio, sterility, fertility of males, and results of tuberculosis and brucellosis tests. The name "cattalo" coined by C. F. Jones of Kansas, years ago, does not apply since it referred only to first crossings and there are now various degrees of parent blood lines (¼ bison, ¾ domestic, 15/16 domestic, 1/16 bison, etc.). Interesting details about this classical experimental breeding are given but no conclusions are drawn, except that the hybrids show a high resistance to tuberculosis as compared with buffalo which have shown an incidence (t.b.) as high as 50 per cent in slaughter tests carried out at Buffalo National Park. [*Deakin, Alan, Muir, G. W., Smith, A. G. and MacLellan, A. S.: Hybridization of Domestic Cattle and Buffalo (Bison americanus) Dominion of Canada, Department of Agriculture.*]

Calf Scours

Though there are specific remedies for white scours *per se* and dietary diarrhea, prevention is stressed. Sanitary litter for the maternity stall, sufficient vitamin A in the expectant mother's diet, prompt disinfection of the calf's navel, early access to colostrum in not too great amounts but from each of the quarters, and allowing mother's milk for the first week, and thereafter pail feed with cow's milk in quantities of six to eight per cent of the calf's weight per day, are the main preventive measures to pursue. Feed warm milk (98 to 100 F.) in clean pails to weak calves, three times a day. Unless tied, avoid keeping calves together, and when scouring or other diseases break out consult a qualified veterinarian. [*Clark, C. F.: Calf Scours, Quarterly Bulletin 24, Michigan Agricultural Experiment Station, pp. 99-100.*]

Sulfaguanidine Fails in Typhoid

A well-controlled trial of sulfaguanidine in 20 cases of typhoid fever hospitalized at the same time and a group of 20 cases used as checks revealed that this drug "is not of value in the treatment of typhoid fever." The initial dose was 0.1 Gm. per kilo of body weight, and doses of 0.05 Gm. per kilo were given every four hours thereafter. The duration of the fever and the stay in the hospital were longer for the treated group. Two of the cases were discharged as "intractable carriers." [*Hall, W. M., M.D.: The Use of Sulfaguanidine in a Controlled Series of Typhoid Cases; abstracted from New Orleans Medical Journal, in Medical Times, lxx (Apr., 1942), p. 134.*]

The Influence of Fluorine on Thyroid Iodine

The size of the thyroid gland of sheep and its content of iodine increased perceptibly and regularly with the increase of fluorine in the ration; and the ratio of thyroid iodine to the amount of iodine consumed in the form of iodized block salt was constant in lots of sheep receiving fluorine and was considerably less when no fluorine was given. Fluorine up to 3 mg. per day did not adversely effect growth nor food consumption, while 6 mg. per day was detrimental to both growth and food intake. The bones of fluorine-fed sheep were

larger but appreciably more breakable. The breaking strength of the bones decreased with increased intake of fluorine. [*Hatfield, J. D., Shrewbury, C. L., and Dyole, L. P., Purdue University: The Value of Rock Phosphate as Supplement for Sheep (an abstract*), Journal of Animal Science, i (Feb., 1942), p. 59.*]

Human and Equine Encephalitides

In having occurred concurrently with an outbreak of poliomyelitis (= infantile paralysis), an epidemic of encephalitis of the equine type in Manitoba indicated that this is one of the most serious communicable diseases of the present time. The mortality was 15.3 per cent. There is no specific treatment. Except that they may prevent such complications as pneumonia, sulfa drugs were found to have but little value. More research will be necessary to determine whether a satisfactory immunizing agent similar to that used in horses can be found and to establish facts concerning the methods of spreading. [*From the summary of a symposium on poliomyelitis and encephalitis, Department of Health and Public Welfare, Province of Manitoba, Canadian Journal of Public Health, xxxiii (June, 1942), pp. 313-314.*]

Sanitation of Food and Drugs

There is no uniformity in food and drug control throughout the various states. Services, control agencies, and standards are multiform —miscellaneous. Whereas, food control may be limited to sanitation of the producers' establishments or is extended to laboratory analyses to determine the accuracy of branding, inspection of markets, stores, restaurants, hotels, etc., as to cleanliness, purity and quality of food stock, may or may not be included. While two-thirds of the slaughterhouses are under sanitary control but one-half of cold storage warehouses are supervised. Prevention of mislabeling, adulteration and false advertising of food is emphasized in some states and ignored by others. In one-fifth of the states, hotel and restaurant inspection is not a function of any state agency. The states are about evenly divided in their practice of including milk sanitation with food and drug supervision. The state and national programs for food and drug control are characterized by lack of accord and wide dispersion of service among numerous agencies (boards, commissions, health and agricultural departments, laboratories), which may duplicate the work of one another. In some instances, the inspection amounts to little more than the collection of fees. Six tables explain the weird situation to which the health of the American people is exposed. [*Mountin, Joseph W., assistant surgeon general and Flook, Evelyn, U. S. Public Health Service: Distribution of Health Services in the Structure of State Government, Chapter V: Sanitation by State Agencies. Sanitation of Foods and Drugs and Food-Handling Establishments, Public Health Reports, lvii (June 19, 1942), pp. 917-949.*]

*The paper is published in full in the *Journal of Animal Science* for May, 1942, pages 131-136 under the title of "The Effect of Fluorine in Rock Phosphate in the Nutrition of Fattening Lambs."

Ointments for Ivy Dermatitis

A chemical agent having the oxidation potential of sodium perborate will detoxify the active principle of poison ivy, contrary reports notwithstanding, provided the detoxicant is incorporated in a suitable base.

Two formulas are recommended on the basis of experimental and field trials. Formula 1 is:

	Per cent
Sodium perborate	10.0
Duponol WA pure.....	2.0
Boracic acid *aa*.....	2.0
Refined paraffin	8.6
Diglycol stearate	12.9
Castor oil	
Olive oil	
Anhydrous lanolin *aa*....	21.5

The second formula, suggested by Assistant Dean George C. Schick of Rutgers University, has the advantage of being less greasy and more pleasant. Its composition is:

	Per cent
Sodium perborate	10.0
Boracic acid	...
Duponol WA pure *aa*....	1.7
Ceresin	3.5
Stearyl alcohol	5.3
Castor oil	20.8
Mineral oil	21.9
Cetyl alcohol	35.1

In preparing these ointments care is taken to prevent breaking down the sodium perborate by heat or water. Both break down the perborate. Before washing off the ointment applied after exposure, clothing should be removed as the unprotected skin may become exposed to contaminated clothes. [*Schwartz, Louis, medical director; Dunn, John E., past assistant surgeon; and Goldman, F. H., chemist, U. S. Public Health Service: A New Base for the Protective Ointment for the Prevention of Poison Ivy Dermatitis, Public Health Reports, lvii (Apr. 17, 1942), pp. 578-588.*]

In having garnered wealth without posting a guard to watch over it, lies our military problem of '42.

BOOK NOTICES

Report of the New York State Veterinary College

IN HIS LETTER to the Board of Regents, President Day pointed out that the work of the college has immediate and practical application to the veterinary problems of the State and includes researches intended to improve the manner of dealing with animal diseases in the future. Regret is expressed for being able to admit but one out of every nine who apply for admission, and a plea is made for restoring the maintenance budget which was reduced 10 years ago.

In Dean Hagan's report to the President, the progress made in teaching methods and a better understanding of the nature of diseases is pronounced encouraging although the taxpayers of the state may not comprehend the benefits received in exchange for the cost of maintaining the institution. They do not realize that the problems of today are not the ones that engaged attention 25 years ago. Where efforts were once lavished on bovine tuberculosis, for example brucellosis and mastitis have taken their place. Major problems come first, the lesser ones later. In the poultry field, where once upon a time, pullorum disease was the main problem, studies of the present time are focused on respiratory infections, leucemia, coccidiosis, and other parasitic ailments. These changes exemplify the shifting attention of laboratory workers and clinicians, and bring to mind the solution of many problems of the past. The work of the staff has dealt with every animal-disease problem in that part of the country, and the reports of it account for the excellent reputation the college enjoys. The institution has accomplished and is accomplishing the purposes for which it was established.

FACULTY

The faculty lost three members to the military service who were given leaves of absence "for the duration." They were veterinary officers of the reserve corps, called into active duty for extended service—rank first lieutenant.

The veterinary faculty comprises 31 members, not including 10 members from other departments who give instructions to the veterinary classes, nor the 21 nonresident lecturers, specialists in their respective fields, who are brought in to round out the Cornell curriculum in veterinary medicine.

STUDENTS

The number of students for 1941 was 359, or 30 fewer than for 1940. The delicate task of rejecting candidates for admission on the basis of educational fitness is discussed sympathetically. Rejections arouse animosity and must be explained. Although the faculty is unanimous on the question of raising the standard for admission, that step was postponed owing to the "uncertainties with which the world is now faced."

All of the students became members of the Junior Chapter of the American Veterinary Medical Association and filed application for membership in the parent association.

VETERINARY CONFERENCE

In January, the thirty-fourth "Conference for Veterinarians" was convened at the college for a three-day session. The attendance exceeded 300. Most of the lectures were given by faculty members.

[The Cornell conference was the first one of these graduate courses for practitioners to be established in the United States. Its sponsor was V. A. Moore who is credited with having founded and fathered a departure in graduate veterinary education that is largely responsible for the clinical excellence of the American veterinary service.—Ed.]

The *Cornell Veterinarian*, now in its thirty-first volume, though not a part of the college, is felicitated for the credit it has brought to the institution in all parts of the world, owing to the quality of the scientific material published.

CLINICS

The growth of the Cornell clinic is shown in a table covering the period from 1909 through 1941. The number of mammals treated in 1909-1910 was 1,175 and in 1940-1941, 22,063. The number of blood tests made by the diagnostic laboratory of the experiment station (cattle and poultry) runs into six figures. Cases treated in the ambulatory under Udall, Fincher and Gibbons were:

Cattle	12,885
Hogs	767
Horses	723
Sheep	92

The cases treated in the small animal clinic under the direction of Milks, Stephenson and Witter comprised:

Dogs	3,733
Cats	846
Other animals	11

The report of the surgical and consulting clinic conducted by Frost, Dank and Bushnell shows:

Horses	857
Mules	5
Cattle	540
Sheep	451
Goats	40
Hogs	1,014

[In view of the qualifications of the clinicians and the facilities available, this vast number of sick animals, transformed into knowledge for students, represents an invaluable asset to the future clients of the graduated student.—Ed.]

MAJOR AND MINOR RESEARCH PROJECTS

In addition to minor investigational work not dignified as formal, there were about 30 formal projects in operation during the year. These concerned metabolism, bovine brucellosis and mastitis, poultry tumors, avian coccidiosis, and parasitic problems of farm animals (sheep, cattle, horses).

Signalized, is the work of Hayden and his coworkers on the chemistry of the blood and urine of domestic animals, the usefulness of which in the application of veterinary science is acknowledged. Pointed out also, are the researches of Dye and Marsten on metabolism (fatty acids, ketones); of Dukes and Batt on electrocardiography; of Udall and Johnson on the chemotherapy of bovine streptococcic mastitis; of Birch and Gillman and Stone on the control of bovine brucellosis (vaccination, milk and udder changes, equine brucellosis); of Baker on animal parasitisms; of Levine on the drug treatment of avian coccidiosis; and of work done on poultry tumors (leucosis).

REMARKS

[These generalities not only give an insight to the scope and character of American veterinary education in 1942 but also indicate the type of guardianship for live stock the veterinary service of this country maintains.]

The appendix contains a group of tables showing the diseases from which the farm animals and pets of rural New York suffer. It is interesting to note that out of 3,733 dogs treated there were no cases of rabies and 7 cases of Weil's disease. In the ambulatory and consulting clinics there were no cases of anthrax, blackleg, rabies or glanders, and only 3 cases of hog cholera and 2 of swine erysipelas. The diagnostic laboratory, however, reports two cases of rabies (dog) and 3 cases of blackleg in cattle.

Compared with the ambulatory and consulting clinic of Iowa State College, for example, one gets a lesson on the regional and ecological factors which change the aspects of veterinary practice in different states.

In the abundance of feed available for the raising of livestock lies the nation's best insurance against food shortage and high costs of living. There will be 600 million bushels of corn to carry over this year.

Except in too large doses, there is no harmful effect known from the use of saccharin as an *ersatz* for sugar.

National Formulary VII

Through the courtesy of the American Pharmaceutical Association comes a copy of The National Formulary VII (N.F. VII) autographed "With the compliments of the National Formulary Committee, Justin L. Powers, chairman."

N.F. VII is the second revision since, in 1930, the American Veterinary Medical Association was invited to participate in the preparations of the formulas used in veterinary medicine. The committee on veterinary preparations for the present revision consists of H. D. Bergman, Iowa State College, chairman; R. F. Bourne, Colorado State College; P. W. Burns, Texas A. & M. College; and C. F. Cairy, Michigan State College.

This familiar book must be evaluated in the practice of veterinary medicine on the basis of its actual purpose: a guide to the preparation of drugs that does not assume any therapeutic responsibility except the suggestive hints on doses required to prevent tragic errors. It wisely supplements U.S.P.XII by including formulas commonly employed in the practice of medicine that are not found therein, and it furnishes the standard tests for purity, identity and quality of the drugs contained in the formulas and of other drugs commonly sold in drug stores which are not admitted in the U.S.P.

Of the three main works on medical material (National Formulary, United States Pharmacopoeia, and United States Dispensatory), the Formulary is the handiest for routine use in the veterinary field, wherein dispensing rather than prescribing is widely practiced and proprietary formulas are extensively used.

The influence of our Committee on the National Formulary (*loc. cit.*) is a hopeful sign of a closer veterinary-medical relation. Certain drugs or preparations, more or less peculiar to veterinary medicine for which there was no official standard, are included. Among them are areca nut, arecoline hydrobromide, kamala, solutions of nux vomica alkaloids, gamboge, and potassium guaiacol sulfonate. A monograph on phenothiazine warns against the use of this new anthelmintic without the advice of a veterinarian. These presents indicate that veterinary coöperation is bearing fruit. The tremendous task involved in editing this valuable book is as evident as its importance is recognized.

Bent as the veterinarians are in presenting their case to the public, the coöperation of the American Pharmaceutical Association is a cause for rejoicing. [*The National Formulary VII, prepared by the Committee on Formulary, American Pharmaceutical Association. Washington. 1942. Cloth, 690 pages. Price $7.50.*]

Stedman's Medical Dictionary

In the editorial rooms of the American Veterinary Medical Association, Stedman's is the dictionary of choice. To be right, "see Stedman's," is the direction. While reasons for the preference are legion, its unswayed literary usage stands first. There would be no end to the liberties medical writers would take but for the leveling influence such as *Stedman's Medical Dictionary* provides. The advantage of world-wide uniformity of usage is too fundamental in the progress of medical science to be sacrificed by the shifting ways of the colloquial language. While informality can not always be condemned, it is generally just that when one "takes pen in hand" to write on a medical subject. Though the dictionary may seem to have no voice in such things as style and syntax, the quality of the finished product lies mainly in the substantives and their derivatives, in other words in the quality of word-building. In this respect, Stedman's is supreme. To cite an example, uppermost in mind just now in poultry medicine, are the "leuco" derivatives (leucosis, leucemia, leucocyte, leucoscope, etc.) which our own Committee on Poultry want spelled with a "k", though the editorial room of the Association long since adopted the English equivalent "c", for proper spelling of these words. If "k" is proper in "leucosis" then we should follow through by spelling "microscope" with a couple of "k's" also, because "leuco" is from Greek "leukos" (= white), "micro" is from Greek "mikros" (= small), and the suffix "scope" is from Greek "skopeo" (= view). This example is cited to stress the significance of derivation in arriving at proper usage and incidentally to answer certain of our critics who prefer the Germanic mutilations of medical terms.

The introductory pages on medical etymology, memorized by veterinary students and studied by veterinarians who write for publication, would lead to the desired uniformity in the future literature of veterinary medicine. Giving the roots of words in arabic letters in lieu of the incomprehensive hieroglyphics of the Greek alphabet which all educated men should (but many do not) understand is commendable and certain to meet with general appreciation.

Nearly 200 tables are scattered throughout the text and these are indexed for convenience. A glance through these tables (*e.g.* vitamins, proteins, *et al.*) shows that the volume is revised in fact. Twenty-four plates on well chosen subjects are noteworthy features. The color plate on anemias and protozoan parasites are particularly graphic. The type chosen to make the black-face type of the vocabulary stand out, adds to the typographic elegance of the Stedman editions.

Terminal "e" in such active principles as "morphine", "atropine", "caffeine" are not arbitrarily lopped off as in some of the attempts to revamp medical orthography. While reasons are found and excuses are made for changing the spelling of these old words, purists of the Stedman type look askance at the liberty taken.

In view of the place veterinary science is taking in the medical scheme, the review of a medical dictionary by a veterinarian is always a disappointing task because important material as useful to the physician as to the animal doctor (but veterinary in nature) is omitted or brought down from the too distant past. Such a group as the Committee on Nomenclature of the American Veterinary Medical Association would be a valuable consultant for writers of medical dictionaries. One doubts that such a committee would define *Alcaligenes bronchosepticus* as "the alleged cause of distemper of dogs, cats, and other animals; that equine encephalomyelitis, in view of its transmissibility to man, would not be clarified beyond the stock definition for Borna disease of Saxony; or that Stuttgart disease, Weil's disease, swine erysipelas and others would have been omitted, had it been consulted. Obviously, the veterinary and medical colonies are oriented too far apart to have inspired the coöperation of their respective lexicographers. As the acceptable terms constantly used and constantly emerging from the fields of veterinary-medical research and scientific animal production are numerous, the inclusion of them would be useful and appreciated by the vast legion engaged therein—a hint to the publishers of medical dictionaries. An unabridged dictionary of medicine and allied sciences would be useful far beyond the narrow bournes of a single profession. 'Till then, when you buy a medical dictionary, get Stedman's. [*Stedman's Medical Dictionary, Fifteenth Revised Edition by Stanley Thomas Garber, B.S., M.D., University of Cincinnati, College of Medicine. Illustrated. 24 plates. 1257 pages. Williams & Wilkins Company, Baltimore. 1942. Price, with thumb index, $7.50; without thumb index, $7.00.*]

Animal Sanitation and Disease Control

This book is reviewed as an editorial on pages 213-214.

[*Animal Sanitation and Disease Control by R. R. Dykstra, D.V.M., Dean of the Division of Veterinary Medicine, Kansas State College. 558 pages. Illustrated. Cloth. The Interstate Printers and Publishers, Danville, Illinois. 1942. Price $2.85.*]

Veterinary Anesthesia

The author writes a useful reminder that anesthesia is no longer slighted in animal surgery but, on the contrary, has become an inseparable part of even minor interventions. The humane, as well as the technical side of surgery, demands analgesia of a definite sort that is applicable to the work at hand, notwithstanding the additional risk incurred through the variations imposed by different species and individualities, and the natural opposition of animals to the anesthetic procedure as compared with the aid received from the human patient. In Great Britain the Animals Anaesthetic Act of 1919 prohibits the performing of certain operations without general anesthesia, but the Act is in need of revision, the author states.

The classification of anesthesia in animals is admirable, namely: (1) local anesthesia, (2) regional anesthesia, (3) narcosis, and (4) general anesthesia. Each of these is subdivided and described as to their use in different classes of veterinary surgical patients (horses, cattle, swine, dogs, cats).

Cocaine heads the list of local anesthetics, though practically out of use in the United States owing to the stringency of the Harrison Narcotic Act. Procaine (novocain), tutocain, benamine, borocaine, quinine and urea, and percaine are described in that order. While one may be pardoned for looking askance at the 12-grain maximum dose of cocaine recommended for horses, all will agree with the author that procaine can be used "almost *ad infinitum*", in animals, and there is no doubting that it lends itself to reckless usage in extensive infiltrations and to excellent advantage.

The cutaneous areas anesthetized in plantar blocking is well illustrated and corresponds to this reviewer's observations. It is likewise gratifying to read that "the techniques of nerve block of the hind limb (of horses) has not been satisfactorily worked out," since all surgeons of note will agree.

The preference is given to infraorbital injection for blocking the maxillary molars, over the more complex procedure of Bemis. Pointing out the difficulty to expect in trying to duplicate the procedure for the mandibular teeth is commendable since the two are by no means comparable. Attempts to inject the inferior dental canal from the mental foramen generally fails to accomplish the purpose.

For the first time (to our knowledge) the technique for blocking for dehorning, developed by Emmerson, is described and properly illustrated in a book, although the method has been widely used here and abroad for several years with perfect satisfaction to doctor and patient. The paravertebral anesthesia of Farquharson in cattle is profusely illustrated and discussed, and one finds the author in accord with American experiences regarding maxillary and mandibular anesthesia in dogs preconized by Frank of Kansas State College and Hinz of Germany.

Twenty-eight illustrated pages are devoted to epidural anesthesia in the ox, horse, pig, and dog, two chapters on horse narcosis (one on chloral and one on cannabis), and one on canine narcosis with morphine. Morphine is pronounced a "very valuable drug in canine surgery," for minor surgical work and for the preliminary anesthesia preceding the use of barbiturates and inhalants. The dose of morphine is given as ¼ to 3 grains according to body weight.

General (inhalation) anesthesia covers the orthodoxy of that art in horses, cattle, swine, dogs, and cats. The apparatus used are illustrated. Except for small animals, chloroform is preferred. The well-known failure of ether in horses and the higher mortality with chloroform in dogs are stressed. Methods of resuscitation from collapse are given. The benefit of adrenaline in syncope is of dubious value. For respiratory failure, carbon dioxide inhalations and articial respiration, hydrocyanic acid (Hobday), respiratory stimulants, and warmth are employed. Pre-operative injections of glucose (3 to 4 days) prevents liver intoxication. Among the nonvolatile anesthetics described are chloral, nembutal, pentathal, narcosol, and chloralose. A special chapter is devoted to nembutal anesthesia in the dog and cat. In 300 cases, 2 were fatal. While the action was constant, there was variation in the depth of the anesthesia. Precise direction for its administration is given, with and without morphine. Nembutal alone is preferred, owing to the exciting action of morphine. The author claims no experience with metrazol and picrotoxin in resuscitation. Experiences with pentathol and avertin are related in separate chapters.

The last chapter is devoted to painless castration of horses and other animals by means of intrascrotal injections of procaine which, as is now generally known, is a perfectly feasible practice and one that should be more widely employed.

The appendix is a transcript of *The Animals Anaesthetic Act, 1919* which schedules the operations in horses, dogs and cats, and cattle, which may not be performed without general anesthesia in Great Britain. While the Act is not perfect, as the author points out, this feature of the book alone should invite American veterinarians to procure a copy as a guide for planning similar legislation in this country.

Summed up, one recommends Professor Wright's manual because it is clearly a relation of uncamouflaged experiences of no small mag-

nitude. No one but a surgeon can write successfully on any phase of surgery. It's a pleasure to possess this substantial manual. [*Veterinary Anaethesia by John G. Wright, F.R., C.V.S., Professor of Veterinary Surgery, University of Liverpool. 207 pages. Illustrated. Cloth. Alexander Eger, Chicago, 1942. Printed in Great Britain. Price $3.50.*]

Hoare's Materia Medica and Therapeutics

Comes the sixth revision of a famous masterpiece on veterinary materia medica and therapeutics, the first edition of which came off the press in 1895. Revisions came out in 1906, 1916, 1924, 1933, and 1942, not to mention the reprints of 1912, 1930, 1936, and 1939. This we believe establishes a record in longevity for books on any branch of veterinary science. The place and the date—Great Britain, 1942—is likewise astonishing since the historian of the next hundred or more years will need no reminder of what they signify in mundane chronology. The wonder is that its talented editor should have found the time and courage to bring this celebrated treatise up to date. This edition will forever be distinguished as a book springing from the shadows of a shattering war, the end of which was not in sight.

But for the now evident fact that the capable authors on materia medica of the nineteenth century wrote better than they knew, a revision in 1942 of material written in 1895 would seem audacious, for, while medicine has made remarkable advancement during that stretch of time, the philosophy of the old authors has lived to be seized and used by their successors of nearly fifty years later. Despite its remarkable march forward, medicine has never been able to discard the teachings of great minds built upon the tenets of common sense, practical experience, keen observation, and fundamental physiology. On the contrary, despite the coming of microbiology into the therapeutic field, modern medicine has had to re-admit many of the discarded drugs and methods deified by the early authors. And, here is the proof: The text material is more interpolated than revised. The editors were able to build upon a solid foundation without revamping the main structure—the foundation of a venerated author, Wallis Hoare.

The book is composed of three parts and three appendixes. Part I is 105 pages on diagnosis; general symptoms of disease; care, management and nursing of the sick; the action and uses of drugs; prescribing and prescription writing; the administration of medicine; veterinary pharmacy; hints on dosage; and a revealing brief on the autonomic nervous system. Although the latter is a newcomer in neurophysiology, it was the old teachers of pharmacodynamics who first signalized its identity. The specialist who comes back into the general field will find these pages as refreshing as the student will find them basic.

Except to avoid glaring omissions, the five and a half pages on vitamins and sulfa drugs add but little to the value of the book in view of the flood of available literature on these subjects which most veterinarians have long since consumed. Obviously, these few pages are intended solely to prevent the geriopsychosis to which all books on materia medica succumb if not periodically interjected with new discoveries. Here, one may also be pardoned for pointing out that the galenical ephedrine is listed among the endocrine products instead of being grouped with the vegetable drugs.

Among the omissions in vaccine and serum therapy are anthrax bacterin and chemically attenuated hog-cholera vaccine (crystal violet vaccine). Brucellosis vaccination of cattle with "Vaccines of Reduced Virulence" (*e.g.* our strain 19), is dismissed with a few, not encouraging words. The statement that ascites in dogs is generally (frequently) of tuberculous origin is startling enough to deserve considerable study.

Part III (95 pages) is a handy compendium on therapeutics that retains many of the old procedures and treatments and includes practically all that is new in current practices. It covers the digestive, respiratory, urinary and circulatory organs and specific infections commonly affecting farm animals and dogs. While herein, there is plenty of room for argument, opinions based upon knowledge and experience must be honored. The American practitioners can profit by studying the methods of their British colleagues and obviously the rule would work both ways. For example, to Greig, milk fever is "parturient hypocalcemia, an acute calcium deficiency in the blood and tissues" and who is qualified to contradict. Inflation stops the transfer of calcium from the blood and calcium gluconate injections simply replenishes the causative loss. Calcium boro-gluconate (2 to 3½ oz. of calcium gluconate and 2 to 5 dr. of boric acid, and 12 to 14 oz. of boiling water) is injected on each side of the neck or into the jugular. The prepared concentrated solutions of the American supply houses are not mentioned. This example is cited to indicate how methods, in important respects, can go on differing through the years. It would be hard to convince the American bovine practitioners that the handy, little bottle of sterilized calcium gluconate solution is not more convenient than making up the dose on the kitchen stove and waiting for it to cool in a—let us hope—sterile vessel.

We have read this revision of Hoare's "bible" with a great deal of interest and not a little profit and, therefore, feel obligated to recommend it without constraint as a dignified documentation of an intricate branch of veterinary

science. [*Hoare's Materia Medica and Therapeutics, Sixth Edition, by J. Russel Greig, Ph.D., M.R.C.V.S., F.R.S.E., Director, Moredun Research Institute, Edinburgh, Hon. Research Professor, Royal (Dick) Veterinary College; and George F. Boddie, B.Sc., M.R.C.V.S., Professor of Medicine and Pharmacology, Royal (Dick) Veterinary College. 528 pages. Cloth. Alexander Eger, Chicago. Printed in Great Britain. Price $6.50.*]

Neoplastic Diseases of Chickens

Inasmuch as the incidence of neoplastic diseases is high in the domestic chicken and causes great losses, it is an economic problem of the first rank. Although the types involving the lymphatic system are the most important to the poultry breeders, the other types should not be neglected since they are responsible for a proportion of the losses. Science is not neglecting the situation. The cause, cure, and prevention are being studied in animals as well as in man, but the usual methods of investigation have not yielded information on the relative frequency of the different types. Large groups of cases have been classified as "leucotic" tumors without subdividing them into lymphocytomas, myelocytomas, etc. An experiment was set up, books on oncology were studied, and a scheme provided for naming and classifying the tumors encountered. During the observation, 384 chickens affected with spontaneous neoplastic disease were studied. Of these, 55.5 per cent were found to be cases of lymphocytoma. Leiomyoma, embryonal nephroma, myelocytoma, leucosis, epithelioblastoma and fibrosarcoma accounted for 33 per cent. Each type was studied and is described in respect to incidence and the influence of age, season, and breed.

While the greatest losses are chargeable to lymphocytoma, new information on losses caused by other varieties (leiomyoma, neurogenic sarcoma, carconosarcoma), and the incidence and character of the different types is recorded. [*Olsen, Carl, Jr., and Bullis, K. L.: A Survey and Study of Spontaneous Neoplastic Disease in Chickens, Bulletin No. 391, Massachusetts Agricultural Experiment Station, April, 1942.*]

Canned Salmon Inspection

The inspection of salmon begins prior to or at the time of purchase. It should consist of an unhurried warehouse examination. Canneries use identifying codes which must be studied. The author gives a résumé of the methods used at the Seattle General Depot (U. S. Army). Because there is a wide range of quality in a given amount of canned salmon, the satisfactory inspection requires that enough samples be examined. While the inspector does not know how the fish were caught, he should know the methods employed by the salmon industry (trap-caught, troll-caught, gill netted, seined). These have a bearing on the time the fish arrive at the cannery after they are caught. There is a recognizable difference, for example, between seine-caught and trap-caught salmon. The former have an "abused appearance." There are also geographic and seasonal factors involved. The early runs are of poor quality compared with the midseason peak of high quality which slowly tapers off to rise again in the late run.

To comply with the requirements of the Food, Drug and Cosmetic Administration, the head space of a can of salmon must not exceed 10 per cent. That provision is satisfied by adding half an ounce of fish to each can.

The complex technical and mechanical factors involved in canning which the inspector should know are described. In the seemingly simple matter of examining a can of salmon, there are many angles unknown to the casual observer. Vacuum, head space, head seam, cross filling, improper filling (fins, gills, blood clots, intestines), odor, color, flavor, pugh marks, and other things enter into the inspection process besides the bloating of cans.

It is interesting to learn that all canned salmon is overcooked for the purpose of making the bone soft enough to eat. What is a Red, a Sockeye, a Chum, a King, and a Cohoe? And, do you know that canned salmon may contain allegedly harmless, coiled up, visible parasites resembling trichinae.

The quality of canned salmon can be determined only by the observation of trained inspectors.

[*Rust, John H., III, Major Veterinary Corps, and Alshire, David L., First Lieutenant, Quartermaster Corps, U. S. Army: "Canned Salmon Examination," the Veterinary Bulletin, U. S. Army, xxxvi (July, 1942), pp. 220-236.*]

Owing to the possible shortage of oils such crops as peanuts, soybeans, flaxseed and cottonseed are more desirable than ever before. The government will loan up to $82.00 a ton for peanuts, $2.10 a bushel for flaxseed and $1.60 a bushel for soybeans.

The poultry industry is a big business. In the last year poultry producers enjoyed an income of $1,500,000,000. The size of the figure is emphasized when it is realized that this income exceeded that of the cattle raisers by $200,000,000, topped the value of the nation's corn crop by $300,000,000, and five of the last six years was second in value only to dairy products.—*Jack Hylton D.V.M. in Veterinary Student.*

What the Papers Say:

THE INDIANAPOLIS STAR

A group of Indiana veterinarians will attend the national convention of the American Veterinary Association in Chicago, Aug. 24 to 27, Dr. J. L. Axby, state veterinarian, said yesterday.

Dr. Axby is a member of the association's executive board.

Discussion will center around the tasks the profession can perform in the war effort and the urgency of greater live stock disease prevention steps to conserve food and meat animals for United Nations war needs, Dr. Axby said.

"We plan to marshal every resource of the veterinary profession for the war effort," Dr. Axby said. "Our greatest task is to see that devastating live stock diseases do not thwart the nation's all-out food production program, and to work with farmers in exercising eternal vigilance against all live stock disease threats. We also expect to take steps toward organizing proper care for pets and small animals during wartime, and also to supply the increasing amount of veterinary personnel required by the military forces."

CHEYENNE (WYO.) STATE

Dr. H. D. Port, state veterinarian, said Monday that a number of Wyoming veterinarians will go to Chicago this month to attend the annual convention of the American Veterinary Medical association Aug. 24 to 27.

At the same time, the state's veterinarians will attend a conference called for the purpose of discussing the part to be played by the profession in the war effort, and the urgency of more livestock disease-prevention activity to conserve food and meat animals.

"We plan to marshal every resource of the veterinary profession for the war effort," Dr. Port said Monday. "Our greatest task is to see that devastating livestock diseases do not thwart the nation's all-out food production program, and to work with stockmen in exercising eternal vigilance against all livestock disease threats."

TURTLE MOUNTAIN (N. D.) STAR

Control of poultry disease and parasites as an effective and practical means of increasing egg production is advocated by the American Veterinary Medical Association. Principal causes of poultry diseases losses recommended for attack are parasites, virus diseases such as fowl pox and laryngotracheitis, bacterial diseases such as pullorum disease, fowl leucosis and tuberculosis.

EAST ST. LOUIS (ILL.) JOURNAL

Dr. A. E. Bott, 1317 Pennsylvania avenue, will represent the State of Illinois in formulating wartime plans of the veterinary profession to aid in the nation's victory effort at the national convention of the American Veterinary Medical association in Chicago, Aug. 24-27, according to word received here Saturday. Dr. Bott is president of the East St. Louis board of education.

A state-wide committee from the veterinary profession has already been set up to coordinate war activities of all veterinarians within this state, authorities said.

SALT LAKE CITY TRIBUNE

Utah will be well represented at the national convention of the American Veterinary Medical Association, Aug. 24-27, in Chicago, according to Don Kenney, state livestock commissioner.

Dr. John I. Curtis, state veterinarian, who will head Utah's delegation, said:

"We plan to marshal every resource of the veterinary profession for the war effort, and the convention is expected to be of tremendous importance in helping with the great task of seeing that devastating livestock diseases do not thwart the nation's all-out food production program. We also expect to take steps toward organizing to supply the increasing amount of veterinary personnel required by the military forces."

LITTLE ROCK (ARK.) DEMOCRAT

A large number of Arkansas veterinarians will attend the meeting of the American Veterinary Medical Association convention in Chicago, August 24-27, Dr. Joe Campbell, state veterinarian reported today. A list of the delegates has not been prepared.

Officials from the Army and Marine Corps and the AVMA will be speakers in the convention and chief discussion will be given over to ways of preventing livestock diseases and conserving food and meat animals for United Nation war needs.

GRANVILLE (N. D.) HERALD

Control of poultry diseases and parasites as an effective and practical means of increasing egg production is advocated by the American Veterinary Medical Association. Principal causes of poultry disease losses recommended for attack are parasites, virus diseases such as fowl pox and laryngotracheitis, bacterial diseases such as pullorum disease, fowl leucosis and tuberculosis.

THE NEWS

AVMA Activities

Convention Notes

The New President

Poised, courteous, gracious, a gentleman from the South, William Wallace Dimock (Cornell '05) is the sixty-fifth president of the American Veterinary Medical Association.

He was born in Tolland, Conn. (1880), and received his early education in that state. In 1905 he received his D.V.M. from New York State College (Cornell), and from the University of Habana in 1908.

The new president began his practice as a veterinarian in Connecticut in 1905; in 1906 he became assistant chief of animal husbandry, Cuban Experiment Station, Santiago de los Vegus; chief veterinarian, National Board of Health, Cuba, 1908-1909; professor of pathology and bacteriology, State College of Iowa, 1909-1919. Since 1919 he has been professor of veterinary science, University of Kentucky, and also head of the department of animal pathology, Kentucky Agricultural Experiment Station. The Kentucky Academy of Science claims him as a notable member, and he is a member of the U. S. Live Stock Sanitary Association. To his credit are more than 50 publications on animal diseases. He and Mrs. Dimock reside in Lexington, Ky.

The President-Elect

Charles W. Bower, Topeka, Kan., was chosen president-elect at the 79th annual meeting in Chicago. He is an outstanding practitioner of the Middlewest and has been a member of the AVMA for 24 years, in fact ever since he graduated from Kansas State College in 1918, where he received his D.V.M.

He has been member-at-large of the Executive Board for the past five years, and secretary of the Kansas State Veterinary Medical Association for many years. Dr. Bower was born in Perry, Kan., in 1896. He practices in Topeka.

Staid in spirit and character, earnest in motive and utilitarian in effect expresses the way the Chicago session of 1942 will be remembered and indelibly recorded in the annals of the Association.

The seventy-ninth annual meeting goes on record as a large convention of American and Canadian veterinarians called to order for the definite purpose of aiding the United Nations to prosecute the most terrifying of all wars.

Forty-six of the forty-eight states were represented at the meeting, one more than last year. The missing states were Montana and Nevada.

Canada had 13 representatives present, two more than last year.

In the Technical Exhibit section, 36 companies occupied 41 booths and provided a most colorful display of what is new in the field of essential material for professional use.

The 1943 meeting is scheduled for St. Louis and the dates tentatively selected are the week of August 23. Probable headquarters: The Jefferson Hotel.

Dallas invited the 1944 meeting for Zone 3 (the South and Southeast). Definite decision regarding 1944 was deferred, pending developments in the over-all situation, until the December meeting of the Board of Governors and Executive Board.

Annual Banquet—917 attended and completely filled the Grand Ballroom of the Palmer House, including the balcony.

Alumni Luncheons—580 attended, a fine figure under the circumstances.

Proceedings: The October JOURNAL will contain the complete business proceedings of the 1942 meeting. Committee reports and reports of representatives will appear in the November issue.

Officers Chosen.—Chas. W. Bower, Topeka, Kans., was unanimously elected *president-elect*, vice, W. W. Dimock who was raised to the office of *president*. C. C. Hasting, Williamsville, Ill., was elected *member-at-large* of the Executive board, vice, Chas. W. Bower whose term of five years expired at this meeting. M. Jacob was re-elected *treasurer* for the twenty-fifth consecutive year.

The vice-presidents elected were E. R. Cushing, Plainfield, N. J.; E. B. Mount, Memphis, Tenn.; A. E. Cameron, Ottawa, Ont., whose 3rd term as member of the Executive Board expired; C. F. Schlotthauer, Rochester, Minn.; and Ward Giltner, East Lansing, Mich. J. G. Hardenbergh was retained as *executive secretary*, and L. A. Merillat as *editor*.

One of the features of the meeting was the session, "Poultry Practice for Practitioners" organized by Cliff Carpenter, chairman of the Poultry Committee. The session was patronized by about 250 and the interest was so acute that planners of future programs will not be able to dispense with this unique section, participants have declared.

Newly elected officers of the Women's Auxiliary.—Mrs. J. C. Schoenlaub, Memphis, Tenn., *president;* Mrs. Chas. D. Folse, Kansas City, Mo., *first vice president;* Mrs. J. L. Axby, Indianapolis, Ind., *second vice president;* Mrs. O. Norling-Christensen, Wilmette, Ill., *third vice president;* Mrs. Glenn L. Ebright, Hammond, Ind., *fourth vice president;* Mrs. C. L. Miller, 1035 Hayes Ave., Oak Park, Ill., *secretary-treasurer.*

The terms of three members of the Executive Board expired with the conclusion of the 1942 session: A. E. Cameron, in District No. 1; W. A. Hagan in District No. 9; and C. W. Bower as member-at-large.

Nominating ballots will be mailed in the near future to AVMA members in Districts 1 and 9. C. C. Hastings of Williamsville, Ill., was elected at the meeting to serve a five-year term as member-at-large.

Outstanding among the events of the meeting was the hearty support received by exhibitors. Although their plans were completely upset by moving the meeting place from the Stevens Hotel to the Palmer House and the date from August 17-20 to August 24-27, the commercial group fell whole-heartedly into the spirit of things and quickly readjusted their plans. None of the regulars fell out and new ones came in to help make up an array of technical exhibits the Association is proud to acknowledge.

Thanks should be extended to the Chicago press—*Tribune*, *Sun*, *News*, *Times*, and *Herald-Examiner*—for the courtesy extended to the Association throughout the meeting. No part of the meeting of general interest was overlooked. The country editions of these metropolitan newspapers carried a great deal of material on the importance of veterinary medicine in farm animals and considerable interest was shown in the Dog Section of the Quartermaster Corps installed into the military forces. Widely publicized was the training of sentinel dogs at the Remount Depot at Front Royal, Va. The dog is now an official military animal, along with horses, mules and pigeons.

Radio Programs During AVMA Convention

Blue Network—Aug. 24—Dr. W. A. Hagan and Dr. J. A. Barger.

Station WGN—Aug. 24—Dr. O. V. Brumley, Dr. J. L. Axby, and Dr. C. C. Franks.

Aug. 25—Dr. W. W. Dimock.

Aug 26—Dr. Robert Graham.

Aug. 27—Dr. W. A. Young.

Station WLS—Aug 25—Dr. L. A. Merillat, Dr. Mark Welsh, Dr. Ralph Hendershott.

Aug 26—Dr. H. W. Jakeman, Dr. A. E. Cameron, Dr. A. H. Quin.

Station WBBM—Aug. 26—Dr. M. L. Morris and Mr. Sydney H. Coleman.

The convention closed with the earmark: elegance without taint of indecorum, pleasure without trace of pomp, and no beating of drums to mar a sober program that was sanctioned, planned and carried out as a part of the war effort.

The interest of American veterinarians in the part they are expected to play in building up the nation's strength was shown by the attendance of 1,756, despite restrictions on travel and the unusually busy lives of the rural group now laboring under the stress of a greatly augmented animal population.

Educational Exhibits

The Educational Exhibits was one of the outstanding features of the convention and attracted a large and appreciative attendance daily, because of the fine quality of the material displayed. An unusually large amount of material was on display which consisted of watch-glass museum specimens, wax models, photomicrographs, photographs, charts and drawings covering infectious diseases, tumor growths, parasites and other pathological conditions in domestic animals. It was especially gratifying to see so many of the younger members of the Association intently studying the various exhibits and taking notes for future study and reference.

The exhibitors cooperating in the Educational Exhibits feature of the convention were the following; University of Kentucky, State

College of Washington; Kansas State College; Michigan State College; Dr. W. A. Cornell, Omaha, Neb.; Dr. L. D. Frederick, Research Laboratories, Swift & Company, the local Pathological and Zoological Laboratories of the U. S. Bureau of Animal Industry; Regional Research Laboratory, Bureau of Animal Industry, Auburn, Alabama, and the Public Information Division of the U. S. Department of Agriculture, Washington, D. C.

The Educational Exhibits were acclaimed instructive, informative and interesting and showed the progress and achievements the Veterinary profession is making in its research and scientific studies.

APPLICATIONS

First Listing*

ALLEN, GLEN L.
614 Vance Ave., Paris, Ill.
D.V.M., Terre Haute Veterinary College, 1915.
Vouchers: T. H. Nichols and W. N. Cochran.

ANDERSON, CAPT. OLIN, V.C.
276 S. El Molino Ave., Pasadena, Calif.
D.V.M., Kansas State College, 1933.
Vouchers: G. M. Wilson and F. E. Smith.

BAILEY, J. H.
841 N. E. Broadway, Portland, Ore.
D.V.M., Washington State College, 1916.
Vouchers. C. H. Seagraves and J. B. Harrison.

BENEDICT, W. L.
427 Chestnut St., Oneonta, N. Y.
D.V.M., Cornell University, 1935.
Vouchers: L. W. Goodman and A. W. Rice.

BENNETT, CLARENCE K.
Henessey, Okla.
D.V.M., Texas A. & M. College, 1939.
Vouchers: C. E. Robinson and R. J. Anderson, Jr.

BLYE, C. E.
1455 Fulham St., St. Paul, Minn.
V.M.D., University of Pennsylvania, 1920.
Vouchers: W. G. Andberg and H. B. Prothero.

BOYD, RALPH H.
3329 N. Capitol Ave., Indianapolis, Ind.
D.V.M., Indiana Veterinary College, 1914.
Vouchers: J. L. Kixmiller and J. L. Axby.

CHESLEY, GUY EDWARD
Rochester, N. H.
V.M.D., University of Pennsylvania, 1898.
Vouchers: R. W. Smith and C. E. Chase.

CLARNO, H. T.
Bloomington, Ill.
D.V.M., Chicago Veterinary College, 1918.
Vouchers: J. V. Lacroix and E. C. Khuen.

COLEMAN, WILLIAM L.
Albany, Ill.
D.V.M., Chicago Veterinary College, 1919.
Vouchers: I. N. Habecker and J. G. Blum.

CURRIER, B. L.
Hamilton Hotel, Omaha, Neb.
D.V.M., Kansas City Veterinary College, 1912.
Vouchers: C. E. Edmunds and W. T. Spencer.

DENISON, W. K.
5th & Robinson, Oklahoma City, Okla.
D.V.M., Chicago Veterinary College, 1912.
Vouchers: H. W. Ayres and H. W. Schmees.

DUFFELL, R. S.
659 Broadway, Macon, Ga.
D.V.M., Indiana Veterinary College, 1917.
Vouchers: C. C. Rife and J. E. Severin.

EASTMAN, D. H.
Aledo, Ill.
D.V.M., Ohio State University, 1922.
Vouchers: J. D. Reardon and P. O. Johnson.

EICKSTOEDT, WILLIAM C.
507 W. Burbank St., Harvard, Ill.
M.D.C., Chicago Veterinary College, 1911.
Vouchers: J. G. Blum and C. C. Hastings.

ERICKSON, KENNETH
Veterinary Station Detachment, 202 Empire State Bldg., Spokane, Wash.
D.V.M., State College of Washington, 1937.
Vouchers: E. E. Wegner and O. L. Bailey.

EVANS, J. H.
Genesee Depot, Wis.
D.V.M., McKillip Veterinary College, 1917.
Vouchers: J. H. Healy and W. R. Winner.

FITZPATRICK, M. W.
Cumberland, Wis.
D.V.M., Kansas City Veterinary College, 1918.
Vouchers: J. H. Healy and W. R. Winner.

FITZWATER, M. C.
23 Sullivan St., Canton, Pa.
D.V.S., Grand Rapids Veterinary College, 1906.
Vouchers: F. B. Mayer and W. H. Ivens.

FOLEY, JOHN W.
7 S. 4th St., Fond du Lac, Wis.
B.V.Sc., Ontario Veterinary College, 1917.
Vouchers: J. H. Healy and W. R. Winner.

GLINDMYER, W. E.
212 Vley Rd., Scotia, N. Y.
D.V.M., Cornell University, 1938.
Vouchers: L. W. Goodman and A. W. Rice.

HAYS, THOMAS A. S.
State Board of Agriculture, Poultry Disease Control, Dover, Dela.
B.V.Sc., Ontario Veterinary College, 1938.
Vouchers: B. W. Bierer and H. McDaniel, Jr.

HEINZ, WILLIAM C.
630 Reading Rd., Reading, Ohio.
D.V.M., Cincinnati Veterinary College, 1915.
Vouchers: A. R. Theobald and W. F. Guard.

HELM, DAVID D., JR.
514 Spruce St., Camden, N. J.
V.M.D., University of Pennsylvania, 1916.
Vouchers: Daniel DeCamp and J. R. Harney.

*See July 1942 issue, p. 54.

HENSLER, V. M.
9210 S. Ashland, Chicago, Ill.
B.V.Sc., Ontario Veterinary College, 1935.
Vouchers: R. E. Willie and L. A. Merillat.

HICKMAN, JOHN B.
405 S. High St., West Chester, Pa.
V.M.D., University of Pennsylvania, 1935.
Vouchers: W. H. Ivens and H. H. Custis.

HOLLAND, E. R.
P. O. Box 126, Fortuna, Calif.
D.V.M., Colorado State College, 1935.
Vouchers: G. D. Hambrook and R. C. Conklin.

JONES, JOHN L.
2623 Eden Ave., Cincinnati, Ohio.
D.V.M., Ohio State University, 1932.
Vouchers: A. R. Theobald and J. G. Hardenbergh.

KELLY, WAYNE A.
2827 James St., Syracuse, N. Y.
D.V.M., Cornell University, 1928.
Vouchers: A. E. Merry and L. W. Goodman.

KINCAID, A. R.
3102 Dodge St., Omaha, Neb.
D.V.M., Chicago Veterinary College, 1914.
Vouchers: C. E. Edmunds and W. T. Spencer.

KRAUS, E. E.
104 Hull St., Clovis, N. Mex.
D.V.M., Colorado State College, 1932.
Vouchers: W. L. Black and T. I. Means.

LUEKING, E. O.
Frumet Rd., DeSoto, Mo.
B.V.Sc., Ontario Veterinary College, 1911.
Vouchers: W. S. O'Neal and A. E. Bott.

MCKEON, M. G.
116 E. Sixth St., Ladysmith, Wis.
B.V.Sc., Ontario Veterinary College, 1916.
Vouchers: J. H. Healy and W. R. Winner.

MAGRATH, L. A.
McCook, Neb.
D.V.M., Kansas State College, 1920.
Vouchers: J. E. Weinman and E. C. Jones.

MALAND, PAUL E.
Charles City, Iowa.
D.V.M., Iowa State College, 1937.
Vouchers: G. B. Munger and P. V. Neuzil.

MESSER, L. W.
Ripley, N. Y.
D.V.M., Cornell University, 1928.
Vouchers: F. F. Fehr and H. F. Wilder.

MESSMORE, H. L.
Altona, Ill.
D.V.M., Chicago Veterinary College, 1914.
Vouchers: L. A. Merillat and J. W. Lucas.

METZ, C. A.
Walnut, Ill.
D.V.M., Cornell University, 1936.
Vouchers: J. D. Reardon and L. M. Darst.

MILLER, CLAUDE W.
Biglerville, Pa.
V.M.D., University of Pennsylvania.
Vouchers: F. E. Lentz and L. A. Klein.

MONROE, FERREL M.
Dana, Ind.
D.V.M., Indiana Veterinary College, 1918.
Vouchers: J. L. Kixmiller and J. L. Axby.

O'CONNELL, H. J.
Rm. 16 West, State Capitol, Madison, Wis.
D.V.M., McKillip Veterinary College, 1918.
Vouchers: N. J. Glucksman and J. S. Healy.

PETERS, JAMES R.
Route No. 1, Archbold, Ohio.
D.V.M., Ohio State Veterinary College, 1931.
Vouchers: E. M. DeTray and R. E. Habel.

POTTINGER, A. M.
Peru, Ill.
M.D.V., McKillip Veterinary College, 1907.
Vouchers: J. G. Blum and C. C. Hastings.

PRATER, A.
c/o Jerpe Comm. Co., A.M.A. Office, Omaha, Neb.
D.V.M., Chicago Veterinary College, 1912.
Vouchers: C. E. Edmunds and W. T. Spencer.

REPMANN, B.
1807 Oaklon St., Park Ridge, Ill.
M.D.C., Chicago Veterinary College, 1908.
Vouchers: J. G. Blum and C. C. Hastings.

ROBERTS, DAN
3206 Holliday, Wichita Falls, Texas.
D.V.M., Texas A. & M. College, 1938.
Vouchers: H. Schmidt and H. L. Van Volkenberg.

ROBERTSON, BASIL E.
210 E. Maple Ave., Ottumwa, Iowa
D.V.M., St. Joseph Veterinary College, 1917.
Vouchers: C. L. Hall and E. S. Dickey.

SHUTE, JOHN D.
c/o Jerpe Comm. Co., Omaha, Neb.
D.V.M., McKillip Veterinary College, 1917.
Vouchers: C. E. Edmunds and T. J. Foster.

SPRAGUE, A. W.
519 Live Stock Exchange Bldg., Omaha, Neb.
D.V.M., Iowa State College, 1910.
Vouchers: C. E. Edmunds and W. T. Spencer.

WELDNER, MORRIS F.
403 Federal Bldg., Cheyenne, Wyo.
V.S., Ontario Veterinary College, 1908.
Vouchers: F. H. Melvin and J. E. Ketcham.

WILKINSON, FRANK B.
701 N. E. 86th St., Miami, Fla.
D.V.M., Iowa State College, 1936.
Vouchers: J. H. Yoder and D. A. Eastman.

Second Listing

Antles, F. H., Seattle, Wash.
Babb, W. F., Utica, Ohio.
Bailey, Earl G., Dexter, Mo.
Blakefield, H. W., 726 Spring St., Berlin, Wis.
Collins, John Bernard, 218 Island St., Chippewa Falls, Wis.
Collins, Roy L., 47 Kenwood St., Pittsfield, Mass.
Conway, James C., Box 182, Fort Branch, Ind.
Copple, E. Don, 2212 Main St., Boise, Idaho.
Cosgriff, Patrick F., 299 Bloomfield Ave., Verona, N. J.

Cottral, George E., Veterinary Station Hospital, Fort Sheridan, Ill.
Crane, Albert J., Ridge Road, Glens Falls, N. Y.
Cross, Floyd, 711 Matthews St., Fort Collins, Colo.
Edmonds, Elmer V., 922 N. Kingsley Dr., Los Angeles, Calif.
Ehrlich, David, 2608 Ave. I, Brooklyn, N. Y.
Gale, John, Station Hospital Camp, Langdon, N. H.
Goldman, Heinz, 3401 Wayne, Kansas City, Mo.
Griesinger, Edward, 1825 S. 1st St., Rt. No. 7, Yakima, Wash.
Harms, H. F., Jr., 137 Piermont Rd., Closter, N. J.
Helming, Robert B., Cresco, Iowa.
Heninger, Fenton C., Newark, Ill.
Henley, C. A., 232 S. East St., Jacksonville, Ill.
Holmes, Lynne F., Box 364, Appleton, Wis.
Hood, Harvey B., P. O. Box 149, Kingstree, S. Car.
Hoover, Clarence Dale, 349 Mariposa Ave., Mariposa Ave., Stockton, Calif.
Jacobson, Harvey W., Denmark, Wis.
Johnson, J. A., 300 S. Brighton Ave., Kansas City, Mo.
Jones, J. L., Blackburn, Mo.
Keefe, Fred, 318 Broad St., Lynn, Mass.
Kerr, O. W., 501 N. Center St., Turlock, Calif.
Kleineck, Roy J., Onslow, Iowa.
Klofanda, Royal, 210 Reed St., Chilton, Wis.
Lahs, P. C., Mexico, Mo.
Lohmeyer, Carl, Somerville, N. J.
Longley, O. A., 2024 Lombard St., San Francisco, Calif.
McGreevy, A. F., 510 W. 19th, Sioux City, Iowa.
McKinnon, J. M., Sanford, N. Car.
McKittrick, J. A., Box 111, Lee's Summit, Mo.
Machado, A. V., Escola Superior de Veterinaria —Gameleira. Caixa Postal, 567, Belo Horizonte—Estado de Minas, Brazil, S. A.
May, Glen H., West Point, Ind.
Moffitt, James T., 1733 Brook Rd., Highland Park, Ill.
Mudd, Rex O., 497 S. Elm St., Kankakee, Ill.
Officer, Charles C., Box 368, Ferris, Tex.
Palmer, T. E., 204 W. Main St., Casey, Ill.
Pinfold, R. W., Waialae Ranch, Kalanianaole Highway, Waialae, Oahu, T. H.
Pirie, Leslie Daniel, Box 72, Riverdale, Calif.
Powell, Edwin T., 2207 Ellis Ave., Boise, Idaho.
Ramsey, S. V., 1093 N. E. 79th St., Miami, Fla.
Reynolds, U. B., Ft. Branch, Ind.
Richards, W. L., Morrisonville, Wis.
Robertson, L. L., Argyle, Wis.
Royer, B., 404 S. Franklin St., Shawano, Wis.
Strait, P. F., 301 S. Water St., Sparta, Wis.
Stroehlein, C. F., 4710 Howard Ave., Cincinnati, Ohio.
Tarnow, F. W., 130 East St., Bedford, Pa.
Taylor, Albert M., P. O. Box 342, Phoenix, Ariz.
Thom, E. G., 6620 20th Ave., Kenosha, Wis.
Topham, Joseph L., Oregon, Wis.
Treman, C. E., Rockwell City, Iowa.
Ward, T. A., Carlisle Barracks, Carlisle, Pa.
Webb, G. C., 1203 Milwaukee St., Kewaunee, Wis.
Whitlock, R. F., Monett, Mo.
Wingerter, A. R., R. R. No. 1, Big Rapids, Mich.
Woodward, B. T., 2315 Riverside Dr., Santa Ana, Calif.
Wrigglesworth, G. B., 106 Gibson St., Eau Claire, Wis.
Youmans, Ray S., Veterinary Hospital, Fort Knox, Ky.
Zimmerman, H. E., 1015 Quindaro, Kansas City, Kansas.

In lieu of reprinting the several hundred names of 1942 veterinary graduates whose applications were given first listing in the August JOURNAL, members are referred to pages 160-165 in the August issue for the names, addresses, schools and vouchers of said applicants. This notice shall be considered, in effect, the second listing of the applicants in question.

1942 Graduate Applicants (First Listing)

Cornell University

LASHER, HIRAM N., B.V.M.
Catskill, N. Y.
Vouchers: A. Zeissig and M. S. Hofstad.

Iowa State College

CHRISTENSEN, EARL T., D.V.M.
Scranton, Iowa.
Vouchers: D. A. Smith and G. R. Fowler.

MUNSON, W. L., D.V.M.
Box 83, Wyoming, Ill.
Vouchers: Greg Raps and L. A. Merillat.

Washington State College

WHITE, LESLIE C., D.V.M.
1820 E. Second St., Long Beach, Calif.
Vouchers: C. A. Schneider and J. E. McCoy.

U. S. GOVERNMENT

Fees for Diagnoses in Connection with Rabies.—Pursuant to the provisions of the Department of Agriculture Appropriation Act, 1943, effective immediately, the Bureau of Animal Industry will charge a fee for all diagnoses in connection with rabies, except those performed for agencies of the United States Government. The fee will be $5.00 when laboratory animal inoculations are made and $2.50 when only a microscopic examination is made. All fees collected for such services will be covered with the Treasury as miscellaneous receipts.

s/ Grover B. Hill,
Assistant Secretary of Agriculture.
Aug. 13, 1942.

Salary Increases. — The prospect of salary increases for veterinarians of the BAI is not bright, says the Bureau Veterinarian for July, 1942. The chairman of the Civil Service Committee of the House of Representatives called off a meeting which was to consider the President's plan for paying federal employees overtime after 40 hours a week.

United States Civil Service Commission Announcement No. 143.—The U. S. Civil Service Commission announces examinations for the positions of assistant veterinarian (salary $2,600 a year), and junior veterinarian (salary $2,000 a year), U. S. Bureau of Animal Industry, Department of Agriculture. The application forms may be obtained from the Secretary, Board of United States Civil Service Examiners, at any first—or second-class post office, except in district headquarters' cities listed below, where the forms must be obtained from the United States Civil Service District Office: Atlanta, Ga.; Boston, Mass.; Chicago, Ill.; Cincinnati, Ohio; Denver, Colo.; New Orleans, La.; New York, N. Y.; Philadelphia, Pa.; Seattle, Wash.; St. Louis, Mo.; St. Paul, Minn.; San Francisco, Calif.; Honolulu; Balboa, C. Z.

Mingle Flies to England.—Following a preliminary survey made in England last year by Dr. Adolph Eichhorn, director of the Animal Disease Station at Beltsville, C. K. Mingle, research worker of the Bureau flew to England to help the British Ministry of Agriculture and Fisheries to combat bovine brucellosis. Traveling on a bomber plane started in a blizzard in Canada Dr. Mingle protected his strain 19 culture from freezing by keeping it under his sheepskin flying suit. Before leaving for home in July, the British laboratory was producing large quantities of vaccine. Brucellosis is reported to be responsible for great losses of milk and meat in Great Britain.

AMONG THE STATES

Arkansas

Geo. H. Stickler has been appointed the state-federal egg grader for the Agricultural Marketing Administration and has authorized State Veterinarian J. S. Campbell to act as state sanitary officer for the inspection of the AMA egg-drying plants. Grading centers have been established at various parts of the state to enable stores to obtain the government seal. Mr. Stickler is rated as an experienced egg grader. An advantage of egg grading by the government is that local consumers may obtain government-graded eggs at the retail stores.

s/ Private Fred (Buddy) Andersen (formerly of the AVMA office.)

California

The newspapers of the state are perturbed over the number of veterinarians going into the military service and the danger of leaving the civilian service under-manned.

• • •

A meeting of physicians, dentists and veterinarians held at Sacramento August 5, was told by army and navy officers how these professional groups can volunteer for service with the armed forces. Among the speakers was Colonel Sam F. Seeley, executive officer of the Procurement and Assignment Service, Washington, D. C.

• • •

Likes the Shorthorn

To the Editor.—The news item on page 174 of the August issue in reference to the record of Carnation Ormsby Madcap Payne is in error in having given her sister Carnation Ormsby Butter King the credit of holding the former record as she was beaten in England when a Shorthorn named "Cherry" beat all records up to that time by yielding 41,644.5 lb. in 365 days. While I have every respect for the Holstein-Friesian, I am a lifetime admirer of the Milking Shorthorn and besides I like to see honor go where honor is due.

s/R. Boyd, D.V.M.,
Mill Valley, Calif.

[The 365-day performance of these three cows is as follows: Carnation Ormsby Butter King, 38,574.6 lb.; Cherry at Wiltshire, England, 41,644.5 lb.; and Carnation Ormsby Madcap Payne (the new champion), 41,943.4 lb.—Ed.]

Colorado

Personals.—John C. Williams, member of the teaching staff of the Division of Veterinary Medicine, Colorado State College for the past two years has entered private practice at Caldwell, Idaho.

G. H. Gilbert and Lee R. Phillips, both Colorado 1941 graduates, are in partnership in Lakewood, Colo.

Canada

Police Dogs.—The Royal Canadian Mounted Police maintain a force of 28 police dogs among which are one bloodhound, eight Doberman Pinschers, three Rottweilers, and one Reisenchnauser. These dogs are used for a variety of services, one of which is guarding the internment camp at Gravehurst, and tracking down men who attempt to escape.

District of Columbia

A notable event of the moment is the retirement of Dr. Ales Hrdlicka, curator of the Division of Physical Anthropology of the National

Museum (Smithsonian Institute) which he has served in that capacity for 40 years. Under his direction there was developed what is conceded to be the greatest collection of anthropological specimens in the world. His writings on the Mongolian origin of the North American Indian and on the Negro population of the United States are rated as classic. Says *Science*, his retirement is "an event which no scientific journal can leave unnoted."

One of his monographs is a treatise on little known Russian groups, millions of them, living where Hitler is trying to go.

Illinois

Headquarters of the BAI tuberculosis force was moved from Chicago to Springfield, June 1. A. K. Kuttler, formerly of Idaho, is the inspector-in-charge. The merger of hog-cholera and tuberculosis work is announced. The former was in charge of James McDonald who was relieved June 30, 1942, on account of arriving at retirement age.

• • •

A sign of the times is the nine watering troughs for horses installed in Chicago during this summer.

Indiana

Backstage Tragedy.—At the Palace Theater, Fort Wayne, in June, Mildred Bailey, soloist of a New York concert orchestra, made the headlines when her 6-year-old Dachshund died from swallowing rat poison that had been scattered about backstage. The fact that the dog was embalmed by a local undertaker and shipped to New York after being pronounced dead at the Charles Gruber Small Animal Clinic is less important in the practice of veterinary medicine than the frequent occurrence of this sort of tragedy. As many veterinarians will attest, the backstage of theaters is a favorite home for rats and scattering rat-poison about to exterminate them is a common practice by stage hands. Lawsuits of importance have grown out of such accidents. Some years ago most all of a valuable troop of trick dogs were fatally poisoned that way in a Chicago theater. The court in that case was not kind to the theater management. The judge wanted to know why actors were not warned against bringing their dogs into such a deadly environment.

Iowa

Eastern Iowa Association.—The executive board of the Eastern Iowa Veterinary Association met at Cedar Rapids, July 26, to complete the plans of the annual meeting in that city October 23-24. The monthly meeting for August was postponed on account of conflicting with the new dates set for the American Veterinary Medical Association at the Palmer House, Chicago, August 24-28.

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Howard F. Beardmore, D.V.M., (Iowa '41), was appointed Assistant Professor of Veterinary Pathology, Iowa State College, August 13, 1942. His duties will include conducting the work of the veterinary diagnostic laboratory and acting as supervisor of the Coöperative Bang's Disease Laboratory, Ames.

Doctor Beardmore replaces Frank D. Blohm, D.V.M., (Iowa '32), who has entered veterinary practice at Hubbard, Iowa.

Kansas

FSA not as wise as the banks.—When local banks loan money on livestock they pay the bills of the veterinarians called in to protect their loans from death losses, but the Farm Security Administration does not, as the following letter indicates:

> The FSA is not responsible for the payment of debts of our borrowers. Although we make every effort to encourage families on our program to take care of their legitimate obligations, we cannot, of course, guarantee payments of bills.
>
> s/David L. Crawford
> For the Administrator

Now while there are many honest people who borrow from the FSA there are too many such borrowers who are not honest and due to the fact that they are not compelled to pay their just bills, they just don't pay them.

To counteract the FSA policy we veterinarians of this section, have had to stop serving them. We exchange lists of borrowers who hold veterinary bills to protect ourselves against the beat beats. If all veterinarians in the United States adopted that plan, either the government will change its plans or we will not accumulate the se no good accounts.

s/ E. H. Lenheim, D.V.M., Lyndon, Kansas.

Maryland

Personal.— Mark Welsh, secretary of the United States Live Stock Sanitary Association and chairman of the State Veterinary Preparedness Committee after making a survey of the state in the line of duty urged that farmers report to their veterinarian immediately if hogs, sheep, cattle, horses or poultry show suspicions of disease. "Some of the most disastrous diseases," Dr. Welsh declared, "start from a few animals of a single farm."

Massachusetts

Personals.—E. A. Woelfer, D. V. M. (Corn. '31), was elected president and chairman of the Board of Certified Milk Producers' Association of America at the Joint annual conference of the American Association of Milk Commissions and the CMPAA in Atlantic City, June 8, 1942.

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Carl Olson, Jr., D. V. M. (Iowa State '31), research professor of veterinary science at Massachusetts State College was granted a leave of absence "for the duration," when assigned for active duty in the veterinary corps. Dr. Olson is a reserve officer with the rank of captain.

Minnesota

The Minnesota Division of the National Association of Bureau of Animal Industry Veterinarians held an important meeting at South St. Paul in April. Former state veterinarian Charles E. Cotton discussed procurement and assignment for veterinarians and H. C. H. Kernkamp of University Farms discussed the scientific phases of hog-cholera immunity confered by serum-virus vaccination. Thirty-two were present. The program of the May meeting was devoted to studies of wildlife diseases including zoo and far-farm animals. Arrangements were made for holding a picnic at Bayport in July.—*From the Bureau Veterinarian.*

Missouri

The sale of 600 mules at auction in one day at the St. Louis yards established a new record for recent years.

Personal.—A. J. Durant, head of the veterinary department, University of Missouri writes an interesting article in *The Goat World* forcasting a prosperous future for the milk goat industry, provided the present goat breeders' association will pull together instead of apart—sound advice for any enterprise.

Montana

Animal Health Excellent.—Following a 1,700-mile tour of the state, Executive Officer J. W. Butler of the Live Stock Sanitary Board reported at the meeting of the state association that sheep and cattle are in excellent condition and disease among them at a minimum. There is no sickness above the natural occurrence. Mid-August was set as the time when Montana cattle will be ready and fit for the market this year. It is too early (July) to predict the incidence of equine encephalomyelitis.

A. H. Quin, Des Moines, Iowa, editor of Bio-Chemic Review speaking at the meeting on seasonal deficiency disease stressed the importance of proper feeding of the young, among other things which cut into the nation's food supply.

G. W. Cronen, BAI inspector-in-charge, was elected president of the Association, and E. A. Tunnicliff of experiment station at Bozeman was retained as secretary-treasurer.

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The Montana Veterinary Medical Association held its thirty-fourth annual meeting at Great Falls, July 10-11, 1942, with the following program:

H. W. Jakeman, Boston, president of the AVMA.—The Veterinary Profession and the American Veterinary Medical Association.

A. H. Quin, Des Moines, Ia., editor, Bio-Chemic Review, Ft. Dodge Laboratories.—Certain Deficiency Factors as they Relate to Diseases of Cattle.

George R. Fowler, Ames, Ia., head of department of Veterinary Surgery, Iowa State College.—Bovine Surgery.

W. J. Butler, Helena.— The Procurement and Assignment Service.

Dr. A. C. Morrow was honored at the banquet as one of the most faithful members. He has been a member of the Montana association since 1912 and was one of the loyal members who gave unstintingly of himself for the welfare of the association for the past 30 years. He retired July 1, 1942 from the Montana Live Stock Sanitary Board after 28 years of service.

The new officers are as follows: G. W. Cronen, Helena, president; J. W. Stafford, Butte, vice president; E. A. Tunnicliff, Bozeman, secretary-treasurer; W. J. Butler, Helena, B. O. Fisher, Great Falls and C. L. Heath, Billings, members of the Executive Board.

s/ E. A. Tunnicliff, *Secretary.*

New Mexico

Board of Examiners.—E. E. Kraus of Clovis was appointed by the Governor to fill the vacancy of the Board of Veterinary Examiners caused by the death of President Carl E. Freeman of Carrizozo; W. L. Hatcher of Cimarron was chosen president. T. I. Means of Sante Fe, remains as secretary-treasurer.

North Carolina

Although North Carolina ranks twenty-seventh in the nation by area (52,426 sq. mi.) and eleventh in population (3,571,623), it stands third in the value of its farm production, thanks to many things, among which are tick, tuberculosis, and brucellosis eradication.

Pennsylvania

Accredited and approved.—The bureau of animal industry announced the addition of the following veterinarians to the "Accredited and Approved" list:

Leslie L. Ellsworth, Meshoppen; George L. Conrad, South Gibson; Gordon P. Busby, Philadelphia; Henry A. Vansant, Bristol; S. Micheal Memish, Beccaria; John N. Harrison, Linn, and George C. Poppensiek, Philadelphia.

• • •

Virginia

State Association.—Wide newspaper publicity was given through an AP dispatch from Staunton quoting the principal speaker at the banquet as warning veterinarians to pay more attention to large animals "whose flesh and products will help win the war and less to saving cats and dogs." The speaker referred to was Dr. J. R. Hutcheson of the Extension Division, Virginia Polytechnic Institute, who described the government's program for producing needed foodstuffs.

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Wisconsin

The state lost two of its pioneer practitioner in May: S. W. Sutcliff (C. V. C. '11) of Mt. Horeb and G. W. Minshall (C. V. C. '04) of Viroqua, whereupon our correspondent aptly wrote "Flake after flake they fall in the deep and silent lake."

• • •

At the Racine County fair in July, the J. I. Case Company, famous makers of threshing machines, staged "A Century of Progress in Threshing" in which the use of the flail was demonstrated by a farmer and his wife. That and the old "horse power" down to the modern combine were a part of the historical exhibit.

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Wyoming

The annual meeting of the Wyoming Veterinary Medical Association was held at Powell on June 22-23, 1942. Program participants were:

N. J. Miller, practitioner, Eaton, Colo.—Diseases of Feedlot Lambs and Sheep, which was illustrated with movies.

Hadleigh Marsh, Montana Veterinary Research Laboratory, Bozeman.—Ovine Mastitis.

The officers elected for the year were: R. F. Noah, Riverton, president; Reuben Blackner, Evanston, vice president; L. H. Scrivner, Laramie, secretary-treasurer.

The time and place of the next meeting was left to the officers to determine owing to the uncertainties of conditions on account of the war.

COMING MEETINGS

Northern Illinois Veterinary Medical Association, Nelson Hotel, Rockford, Ill. Sept. 16, 1942. W. C. Glenney, Elgin, secretary.

Southern Veterinary Medical Association, Biltmore Hotel, Atlanta, Ga. Sept. 23-25, 1942. L. A. Mosher, P. O. Box 1533, Atlanta, secretary.

Short Course for Veterinarians. Purdue University, Lafayette, Ind. Oct. 15-16, 1942. C. R. Donham, head, Dept. of Veterinary Science, Purdue University.

Florida State Veterinary Medical Association annual meeting, Hotel Thomas, Gainesville. Oct. 26-27, 1942. V. L. Bruns, Williston, secretary.

Oregon State Veterinary Medical Association, McMinnville, Oct. 14, 1942. Charles H. Seagraves, 1514 Washington St., Oregon City, secretary.

DEATHS

Jos. A. Allen (Ont. '16), 57 years old, of Winnipeg died in April, 1942. He was born in Belfast, Ireland. He was the director of the Experimental Fur Farm of the University of Manitoba for many years. He had been a member of the AVMA since 1918.

C. E. Edmunds (N. Y.-Am. V. C. '06), 61 years old, of Chicago, Ill., died July 22, 1942. He was a member of the AVMA.

Ralph E. Noyes (K. C. V.. C. '07), 62 years old, of St. Louis, Mo., died August 9, 1942 at Albuquerque, New Mexico. He served the BAI for many years, and in 1940 joined the city meat inspection staff of St. Louis. He was born on a farm near Humboldt, Kan., May 18, 1880.

Monte C. Smith (U. S. V. C. '13), Cedar Rapids, Ia., died July 14, 1942. He had been associated recently with the BAI after having spent many years in general practice in Iowa.

Robert J. Digman (C.V.C. '08), 57 years old, BAI inspector of Milwaukee died suddenly of a heart attack, May 21, 1942 while returning from a vacation with his family.

Howard C. Reynold, D.V.M., 63, (OSU. '04), died at his home near Harrisburg, Pa., July 6, 1942. He was a prominent figure in the Holstein-Friesian association, the State Milk Control Commission activities, and Pennsylvania political circles.

James B. Way (K. C. V. C. '14), age 59, of Cynthiana, Ky., died June 18, 1942. He was born in Millersburg, Ohio, in 1882. Dr. Way served the BAI in New Mexico, Texas, Arizona and Kentucky. In 1937 he was retired. He joined the AVMA in 1917 and was also a member of the Kentucky association.

VETERINARY PREPAREDNESS

Conference Held on Veterinary Aspects of Procurement and Assignment Service with Lt. Col. Seeley and Brig. Gen. Kelser

On Tuesday evening, August 25, during the AVMA Convention, an opportunity was afforded veterinary members of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians to meet with Lt. Col. Sam F. Seeley, Executive Officer of the Service, and Brig. Gen. Raymond A. Kelser, chief of the Veterinary Division, Surgeon General's Office, War Department. Nearly 200 veterinary representatives attended, including chairmen and members of state veterinary committees, veterinary members of corps area advisory committees and the Committee on Veterinary Medicine of the P and A Service.

For two hours an executive session was held during which time Lt. Col. Seeley and Brig. Gen. Kelser answered many questions which have come before the state committees in the work of procuring and assigning veterinary personnel to meet military and civilian needs. The conference was most helpful in clarifying problems that have puzzled the committees and, at the end, a rising vote of thanks was extended to Lt. Col. Seeley and Brig. Gen. Kelser for their efforts. Coupled with the talks given by these same men before the general session of the convention on Tuesday afternoon, the work of the P and A Service and the War Manpower Commission received a great stimulus among veterinarians. Lt. Col. Seeley complimented the profession for being first in its percentage return of enrollment forms and questionnaires.

Effect of the Change in the Selective Service Law upon the Possibility of Drafting Physicians, Dentists, and Veterinarians.

In accord with the recent amendment of the Selective Service law, National Headquarters of Selective Service has issued to all State Directors and Local Boards the regulations pertinent thereto. These regulations were summarized in Selective Service release No. 279, dated July 14, 1942, from which the following excerpts have been chosen as of special interest to veterinarians:

"Emphasizing that the fundamental purposes of the Selective Training and Service Act of 1940, as amended, are procurement of sufficient men for the armed forces and maintenance of production essential to win the war, Maj. Gen. Lewis B. Hershey, Director of Selective Service, today declared that, so far as is practical in carrying out these requirements, the *bona fide* family relationship of registrants would be protected as long as possible.

"At the same time, National Selective Service Headquarters announced distribution to its agencies of a list of 34 broad essential activities compiled by the War Manpower Commission. The list, which includes under broad activity classifications 'the products, facilities, and services considered necessary to war production and essential to the support of the war effort', was prepared to guide local boards when considering individual registrants for occupational classifications but in no way alters the statutory ban on group deferments.

"With regard to protection of family relationships and dependents, National Headquarters issued amendments to its regulations a memorandum supplementing recently outlined broad policies for induction of single men with dependents and married men who maintain bona fide family relationships in their homes with wives, children, or both.

"Broadly, the amendments and memorandum break down Class III-A and Class III-B (the first for the registrant with dependents who does not contribute to the war effort, and the second for the registrant with dependents who does contribute to the war effort) so that when selecting men for induction the local boards may give consideration to both their dependency status and activity in war work.

"This breakdown authorized local boards to consider for selection registrants as follows: (1) Single men with no dependents; (2) single men who do not contribute to the war effort but who have dependents; (3) single men with dependents and who contribute to the war effort; (4) married men who are not engaged in the war effort but who maintain a bona fide family relationship with a wife only; (5) married men who are engaged in the war effort and who maintain a bona fide family relationship with a wife only; (6) married men who are not engaged in the war effort and who maintain a bona fide family relationship with wife and children or children only, and (7) married men who are engaged in the war effort and who maintain a bona fide family relationship with wife and children or children only.

"In all cases the dependency status must have been acquired prior to December 8, 1941, and at a time when induction was not imminent. . . ."

"Furthermore, to carry out its present policy, National Headquarters said that all registrants without dependents of any kind under the law

and regulations shall be selected for induction as rapidly as they can be made available.

"When the supply of single men without dependents and who are not 'necessary men,' in any local board area is exhausted and when, in the opinion of the local board it shall become necessary to meet anticipated calls, National Headquarters said the local board may then review in sequence of their order numbers, the classification of all registrants who have been placed in Class III-A by reason of having one or more of the following persons dependent upon them: Wives or children (with whom they do not maintain a bona fide family relationship in their homes); parents, brothers, sisters, grandparents, grandchildren, divorced wives, persons under 18 years of age whose support has been assumed in good faith, or persons of any age physically or mentally handicapped whose support has been assumed in good faith. Classification of all such registrants shall be reopened and considered anew, with the local board applying actual support as the sole basis for continued deferment in Class III-A. By this review, it was pointed out, some registrants may be reclassified to Class I-A because of changes in financial status. . . ."

"The list of civilian activities necessary to war production and essential to the war effort, which may be used to guide local boards in considering occupational classification of registrants, specifies that such activities must meet one or more of the following tests:

(a) That the business is fulfilling a contract of the Army, Navy, Maritime Commission, or other Governmental agencies engaged directly in war production;

(b) That the business is performing a Governmental service directly concerned with promoting or facilitating war production;

(c) That the business is performing a service, Governmental or private, directly concerned with providing food, clothing, shelter, health, safety, or other requisites of the civilian daily life in support of the war effort;

(d) That the business is supplying material under subcontracts for contracts included in (a), (b), or (c), above; or,

(e) That the business is producing raw materials, manufacturing materials, supplies, or equipment, or performing services necessary for the fulfillment of contracts included in (a), (b), (c), or (d) above. . . ."

The list of essential activities, 34 in all, includes the following which are of interest to the veterinary profession:

Agriculture: Dairy, livestock, poultry, truck, sugar beet, sugar-cane, hay, peanut, soybean, cotton, fruit and nut, potato, dried pea and bean, crop specialty (e.g. flax, hemp), seed and general farms; agricultural and horticultural and animal husbandry services such as tree planting, cattle feed-lot operation, threshing, grist milling, grain cleaning, plowing, corn shelling. Includes also such essential assembly and marketing services as milk and cream assembly stations and cooperative marketing associations.

Food processing: Fishing, meat-packing and slaughtering, production of butter, cheese, condensed and evaporated milk, canned and cured fish, canned and dried fruits and vegetables, canned soups, fruit and vegetable juices, flour and other grain mill products, prepared feeds for animals and flowls, starch, cereals, baking powder, rice, bread and other bakery products, sugar, leavening compounds, corn syrup and edible fats and oils.

Health and Welfare services, facilities and equipment: Water supply and sewerage systems; irrigation systems; dental and medical laboratories; hospitals; nursing services; fire and police protection; public health services; weather services; coast and geodetic services; engineering and other testing laboratories; offices of dentists, physicians, surgeons, osteopaths, chiropodists and veterinarians; professional engineering services. Includes also the manufacture of X-ray and therapeutic apparatus, and of surgical, medical, and dental instruments, equipment and supplies.

Educational services: Public and private vocational training; elementary secondary, and preparatory schools; junior colleges, colleges, universities, and profesional schools; educational and scientific research agencies.

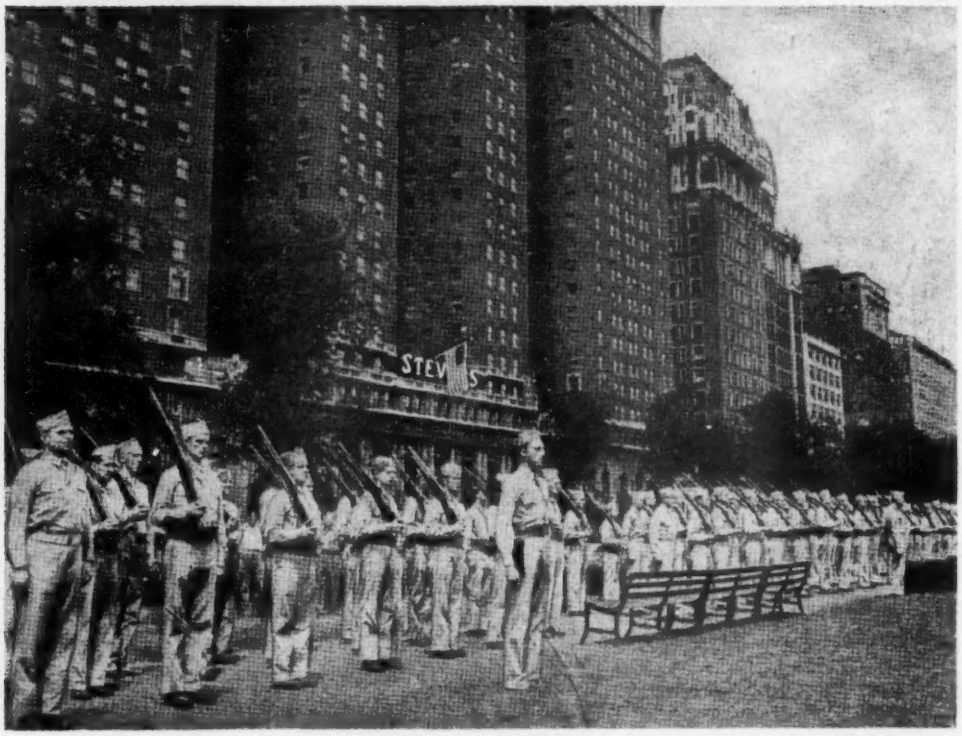
Governmental services: Including services necessary for the maintenance of health, safety, and morale, and the prosecution of the war.

What the Drug Trade Is Trying to Improve

The pig crop of 1942 will reach an all-time high of 100 million head, or 25 million head more than a year ago. Pork, lamb, beef and lard are abundant beyond all expectation, and the dairy cows are producing surplus food faster than the ships can take it away. From October to April, there will be more livestock marketed than ever before in all American history. It is doubtful, say a *National Livestock Producer,* if the inland transportation facilities and packing plants can handle this tremendous output of farm animals.

The American Meat Institute reported that meat production reached an all-time high in June.

An' Related Topics



The reason for changing the headquarters of the 79th annual meeting from the Stevens Hotel to the Palmer House—at the last moment.

Violent bomb explosions cause rupture of cephalic capillaries. Instead of shell shock as in World War I, the damage is now called "blast concussion." The neurosis of the bomb victim has no relation to his courage or morale.

The $150,000,000,000 arms progam now approved is barely a starter. It is geared from a small army of 3,600,000 men. The strain on man power equal to that now in Germany, Japan and England will be reached when ours is an army of 10,000,000 and a navy of 500,000.—*Newsgram, United States News.*

A familiar sight all over Great Britain are the large blue-gray cars of the American Ambulance bearing crossed flags of Britain and U. S. A. The ambulance is sponsored by the American Society in London. It has 260 motor ambulances manned with surgical units equipped for first-aid work.

One day's menu for the American soldier in November, 1941, was as follows: *Breakfast*—orange, assorted cereal, fresh milk, cheese omelet, lyonnaise potatoes, bread and butter, coffee. *Dinner*—barley soup, roast beef, creamed potatoes, spinach, pickled beats salad, bread and butter, coffee. *Supper*—spareribs, boiled potatoes, buttered cabbage, cinnamon buns, bread and butter, coffee.

An' Related Topics

Stay Alive and Save Money

A woolen overcoat costs from $30 to $40, a wooden one from $400 to $500.

A shave costs 25 cents at the barber shop, at the morgue it's $5.00.

A two-way ride to the theater costs a dollar or so, a one-way one to the cemetery around $10.—*From a JAMA Funny Filler.*

Rural Veterinarians on Preferred List

The favors extended to practitioners of veterinary medicine in the matter of procuring material required to carry on has wider application than tires and gas in Great Britain. An example is the following type of certificate required for the procurement of clothing:

"I ..... a veterinary surgeon engaged in agricultural practice at ..... hereby declare that I require for my own use in my agricultural practice, the following articles of clothing ....."

The certificate is not issued to firms. Each assistant or member of a firm of veterinary surgeons must make his own application, the instructions state. — *From The Veterinary Record, Apr. 4, 1942.*

One of the pleas for the emergency is more and earlier turkeys.—*USDA.*

One of the blessings of the war [every war has its blessings] is the better understanding of the gradation of foods by the

---

The *per capita* meat consumption in the United States was 140.6 lb. for 1940, 131.7 lb. for 1939, and for 1935 to 1939 the annual average was 126 lb.—*Food Industries.*

Hog prices
have now reached
the highest level
in sixteen years
(since 1926)

ANTI-SWINE ERYSIPELAS SERUM
and
CULTURE VACCINE
Lederle

SWINE ERYSIPELAS is a rapidly growing menace to the swine industry, second only to hog cholera.

"Anti-Swine Erysipelas Serum *Lederle*" was the first serum made available to the veterinary profession to combat this disease in the United States.

Lederle Laboratories' production program has been set up to provide sufficient stock to care for the rapidly increased demand resulting from rising hog prices, increased hog population, and the increased disease incidence.

"Erysipelothrix Rhusiopathiae Vaccine *Lederle*" is also available to veterinarians holding permits to administer the product.

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PACKAGES:
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50 cc. vial
100 cc. vial
250 cc. vial
ERYSIPELOTHRIX RHUSIOPATHIAE VACCINE *Lederle*
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Twenty-five words or less, $2.50; 8 cents for each additional word. Replies sent in care of the JOURNAL, 25 cents extra.

Position Wanted

1941 honor graduate desires position as assistant in mixed or small animal practice. Eastern states preferred. Address "DC," c/o Journal of the AVMA.

Wanted

Veterinarian, man or woman, for small animal practice. Salary $50 per week plus commission. State racial descent, qualifications. Must be in class free from army draft and furnish references as to proof of honesty and ability. Position open around October 1. Location, Detroit, Mich. Address "RD," c/o Journal of the AVMA.

Veterinary assistant for small animal practice in large Michigan city. State age, draft status, experience, etc. Address "ON," c/o Journal of the AVMA.

Veterinarian to take over established small animal practice in large Pennsylvania city. Prefer man not subject to draft. Address "TZ," c/o Journal of the AVMA.

Good, general practice, lease or buy. California preferred. Also interested in used equipment with or without practice. Address "ER," c/o Journal AVMA.

Books and Magazines

WORLD MAP OF DOGS—Unique, Educational; 19" x 24"; $1.00 each (3 for $2). Also Chart of All American Breeds, same size, same price. A complete American work on dogs, *Judy's Dog Encyclopedia*, with supplements, $5. Judy Publishing Co., 3323 Michigan Blvd., Chicago, Ill.

For Sale or Lease

Small and large animal practice on Pacific coast. Completely equipped for small hospital. Reason for selling. Address J. Koch, 1645 Ninth St., Santa Monica, Calif.

PRACTICES, LOCATIONS and parnerships furnished and sold—all states. F. V. Kniest, 1537 S. 29th St., Omaha, Neb.

An' Related Topics

Writing is one of the most vexatious and laborious crafts ever undertaken by presumably sane men.—*Mencken in Liberty.*

It is said that the amount of lipstick used by American women would be sufficient to paint 40,000 barns.

In getting over the big idea—so we are told—that diseases of farm animals can wreck the country, nothing short of an earthquake can shake some folks into that way of thinking.

Our Country Needs

MORE PORK—MORE BEEF

It is intimated we may be short—very soon—on beef and pork. We need more—and still more—for (1) our army; (2) our navy; (3) our marines; (4) our flying and ground forces; (5) our civilian population; (6) our millions of allies.

Uncle Sam is looking to the beef and pork herdsmen for the biggest production in our history. And they can do it—with the help of the Veterinarian.

This FREE BOOK *will help* YOU

Tells how any feeder can use his own home grown grains, legumes and roughages—plus—economically priced concentrates—plus—a very small amount of VPC Con-o-mineral Compound (with its calcium, phosphorus, iodine and vitamin content) to decrease his feed costs and increase his profits.

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An' Related Topics

Those who value their property more than their liberty would soon lose both but for the liberty-loving majority who do the fighting.

Nothing more clearly confirms the philosophy of *Mein Kampf* than slinging mud at political opponents when a nation is fighting for its very life.

Probably not one interne out of a hundred knows the difference between good and bad eggs, Katherine Bain told dieticians attending the meeting of the American Dietetic Association at St. Louis.

In a speech at Madison Square Garden in August, Admiral Richard E. Byrd of Antarctic fame said, "We can not take our freedom for granted as if no one had fought for it."

The Old Gray Mare and the Anti-Gray-Hair Vitamin

While the much discussed anti-gray-hair vitamin seems to be but another therapeutic bubble that was punctured before the drug market got its cut, we are not so sure that the scientific arguments against it are entirely valid. They remind one of the old white horse that gradually lost its dapple as age advanced, presumably because the mechanism (wherever it is) quit making pigment (melanin). In some cases, the production doesn't quit, but the hair having (somehow) lost the knack of taking it, gets white. In certain other cases, more or less rare, the surplus (because of unreceptive hair) collects in lumps called melanotic tumors or, better still, melanosis. Now (with apologies to Dr. Hrdlicka), if a vitamin kept the melanin-production machinery working and the hair receptive despite age, there is no reason to believe that the whitening of hair could not be prevented. The question is one for the science of geriatrics to unravel.

An' Related Topics

The Thirst for News

An example of the unpatriotic disobedience of the rules set down by the Office of Censorship, was the rush of the press and radio to announce that a large convoy of American ships loaded with troops and matériel was sailing across the southern Pacific on the way to Australia. Big headlines and hourly broadcasts for several days (lest the enemy were asleep), was the plan of action. Truly, the thirst for news (or is it just the greed of commercial competition) is intense.

The Colorado Potato Bug*

One of the major tragedies of World War I was the introduction of the Colorado potato bug (= *Leptinotarsa decemlineata*) into continental Europe. This pest is said to have come to France with the American Expeditionary Force in 1918 and was first reported in Spain in 1935 when potato crops in provinces bordering on the French frontier were found to be infested with this insect enemy of American agriculture. Tremendous efforts, made to prevent its spread including prohibiting the raising of potatoes over large areas have been in vain owing to a certain extent to the events of the civil war. Chemical treatment of the soil and burning of infested vines of potatoes, peppers, tomatoes and eggplants, quarantine of plants, netting streams and the publication of educational leaflets and posters, all under official decrees, illustrate Spain's estimate of the damage this insect is capable of doing to a major source of carbohydrate.

*An abstract from International Review of Agriculture (Rome, Italy), Sept. 1941.

Stop 'em Flyin'!

with HYDRONEX

A Fly Spray Concentrate for Large Animals

HYDRONEX is a concentrate for making an aqueous fly spray. One part of concentrate is diluted with 15 parts of water. This spray kills the flies it contacts and repels from 6 to 8 hours after spraying.

The active ingredients are not volatile, therefore are deposited on the hairs. This accounts for its long-lasting, repelling effects.

8 REASONS

1. No oil.
2. Collects no dirt.
3. Nontoxic.
4. Nonirritating.
5. No offensive odor.
6. Kills by contact.
7. Temperature of animal remains normal.
8. Costs less.

Send for Literature

Corn Belt Laboratories, Inc.

EAST ST. LOUIS, ILLINOIS

An' Related Topics

American Farmer Can Be Depended Upon

If not swayed by selfish leaders, the American farmer in this fight for country, is as stable as the pioneers who carried the flint-lock musket on the plow handles. They look forward toward furnishing the abundant output of food, feed and clothing material which represents one of the main implements of modern warfare. In all wars, they have suffered hardships and made sacrifices, and without exception the post-war adjustments have been nothing less than cruel to them. The fruits of their war efforts have been crops of mortgage foreclosures, low prices, and a hopeless outlook which drove their children to the cities.

While they, too, have property to protect and dignity to preserve, patriotism *per se* has never been lacking among the men and women of the farm—no more in 1942 than in the War of Independence. Their burdens are heavy, their labors hard, and their income relatively small. The country is again counting on them now and it will not count in vain. No one is more qualified to speak in their behalf than the guardians of their live stock.

When the American farmers join up with the labor unions as press reports indicate they are going to do, the Farm Bureau will find out that "there are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

The universe is heading toward an early death, says Professor Russell of Princeton. It can't live more than a mere two or three billion years longer, he told the Inter-American Astrophysical Conference.

The JOURNAL congratulates the American Kennel Club for having succeeded in having a dog service established in the Army of the United States. While the initial step is confined to the use of dogs in watching installations their use with troops in action is quite certain to follow.

An' Related Topics

Holding the price at 90 cents a bushel and encouraging the feeding of wheat to livestock is a part of the program to step up food production. There are 100 million bushels available for that purpose.

There are 54,000,000 workers in the United States. Of these, the armed forces will require 9,000,000, the war industries, 25,000,000 and the civilian industries including farming, 20,000,000. There is no assurance that workers will not be drafted, as was done in England and Germany.—*United States News.*

Re: Racial Superiority

Says the *New Orleans Item:* "While a gang of white men in New York City was counterfeiting war stamps, Negro school children in New Orleans were buying $8,000 worth of them out of pennies and nickels they did not spend for lunches and candy."

An' Related Topics

O Tempora, O Mores

The 1940 census is full of the view-with-alarm type of statistical material. The birth rate of daughters exceeds that of sons by 12 per 1,000 and women live three years longer than men. Only 2.5 children are born per family and, says Harvard scientists, it will take four children per family to avert national decay.

When Food Is Scarce

Shortage of food is more impressive than air raids. The air raid comes to an end while the food shortage is there every day with unmeasurable effect on the morale and physical fitness of the people. In England, policemen go from house to house collecting kitchen waste and cook it in pots at the police stations for the feeding of pigs raised in odd corners to augment the owners' officially-restricted rations. In the country, school children comb the woods for acorns to feed pigs. This food-making project is operated by 18,000 pig clubs which last year produced 3,000 tons of delectable bacon, not to mention the raising of chickens and rabbits and back-yard vegetables in many a nook.

Regrettable as it is to relate facts which must give considerable comfort to the enemies of the Allied Nations, the need for doing so is self-evident to the small army of American animal-disease fighters, whose work is precisely that of preventing food shortage and all of its alarming ramifications.

Women's Army Corps! Why not? Perhaps it will take charge of the pacifist sob sisters who got us into this mess in the first place.

Appetite is a desire involving sight, taste, smell and touch. Food may be repulsive to any one or all of these senses.

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An' Related Topics

Tetanus and Tanks

A contributor to "Tonics and Sedatives" (AMA Journal) discovers that the low incidence of lockjaw in this war is due, not to the use of toxoid, but to the fact that tanks do not defecate, and, here, we always thought that something was putting those darned drum sticks in dobbin's belly. Page Spallanzini!

Just that Easy

Says David Lawrence in *The United States News:* "We need to conquer ourselves before we can help others. We need to fight hardest [to win this war] against the selfishness, the dishonesty, and the lack of frankness with each other, and the indifference to the suffering of human beings which primarily produce conditions that bring on wars."

Fine! All there's to do is change, right-about-face, the human nature that started to flourish in the Garden of Eden, 4004 B. C., or thereabouts.

Trench Mouth

The Medical Department report for World War I records 6,189 cases of trench mouth (Vincent's disease) among American soldiers in France. Days lost on account of trench mouth is given as 92,690. World War II has revived interest in this serious stomatitis, the etiology of which is not known. The most generally entertained theory is that it is due to a spirochete that is normally harmless but which becomes pathogenic from vitamin C deficiency. Trench mouth is a part of the medical record of all great wars. Xenophon (401 B. C.) mentioned the suffering of his soldiers in Persia from sore mouth and fetid breath. It was also a scourge of the Crimean War (1854-1856).

Meat is a "must" ingredient of the human diet. In Europe, since cattle have long since been slaughtered and the grain needed to feed replacements is used for human food, the post-war call will be for American meat.—*From Science News Letter.*

An' Related Topics

Iron for Horseshoes

Secretary Dinsmore of the H & M Association calls attention to a step taken by the War Production Board which may abolish some of the trouble in the procurement of iron by horseshoe manufacturers. The producers of horseshoes under date of July 1, were requested to furnish an inventory of all finished products in the hands of distributors, indicating the coming of a favorable action in behalf of horseshoeing.

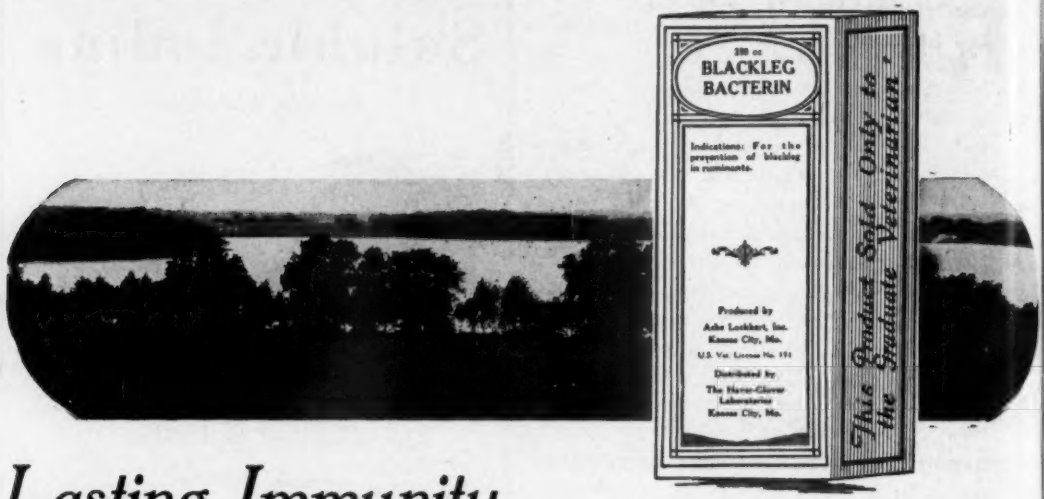
Publicity and Publicity Programs

The moral of blowing one's own horn may seem dubious in any event. In professions based upon formal college training, promoting their work through programs of planned publicity can be castigated as violations of good behavior. Not so in the veterinary profession, however. Advertising the work done by veterinarians is not only a justifiable but also a yeoman's service in the United States. In fact, it is Duty No. I, because the go-getting, industrial-bent American public, fighting for survival in the 166th year of its life, remains unaware that *the strength of the white man's civilization resides in the raising of farm animals.* Until that is more generally understood and acted upon with unselfish motives and common human intelligence, there can not be too much horn blowing about the part veterinary science has to play in peace and in war. Particularly under present world conditions, our responsibility is to sound off until a slumbering public gets up to see what it's all about.

Summed up, publicity work in veterinary medicine belongs in the agendum of unfinished business.

An optimist just now is the man all het up over post-war problems.

A Japanese fungus is attacking wheat in New York and there is an unusually large number of Norway rats in the plains states. Watinel!



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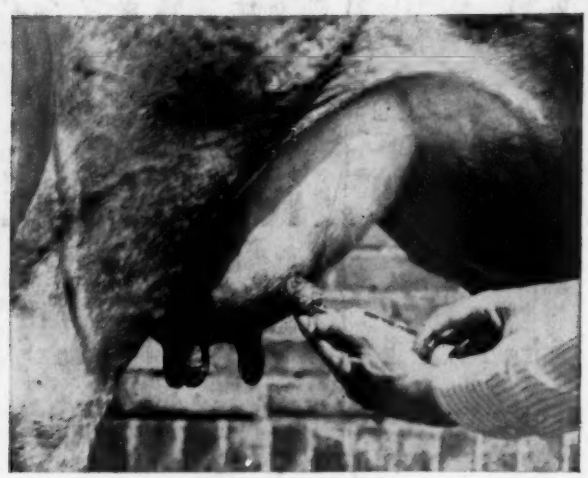

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